

# Happy Voyager Resource Manual



**BERNINA<sup>+</sup>**

**HAPPY**

# **Bernina Happy Voyager**

## **Resource Manual Addendum**

### **SAFETY REGULATION**

Please refer to the Safety Regulation of the original Happy Voyager User/Operation Manual and as such are hereby incorporated with this addendum.

The information contained in this Manual is designed to assist in operating the Happy Voyager machine. This Manual is not intended to be complete or to replace the original Happy Voyager User/Operation Manual. Its purpose is solely to educate the Bernina Happy Voyager Machine Operators.

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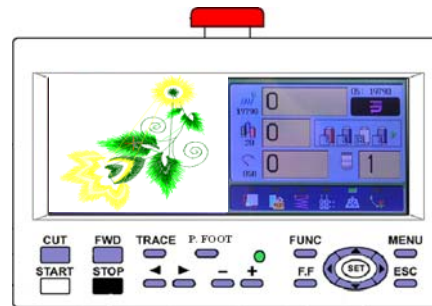
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**Description of function**

Identifying and explaining the functions of the keys/buttons on the control box.



**ARROR Keys (Up, Down, Left, Right):**

- In the **DRIVE** mode move the hoop.
- In the **MENU** mode used to navigate to desired item.

**SET button:** Select and execute a function.

**MENU button:** Enter the menu mode. (also enter into submenu's).

**ESC button:** Stop or cancel a selected setting. (Used to escape out of a menu or function.)

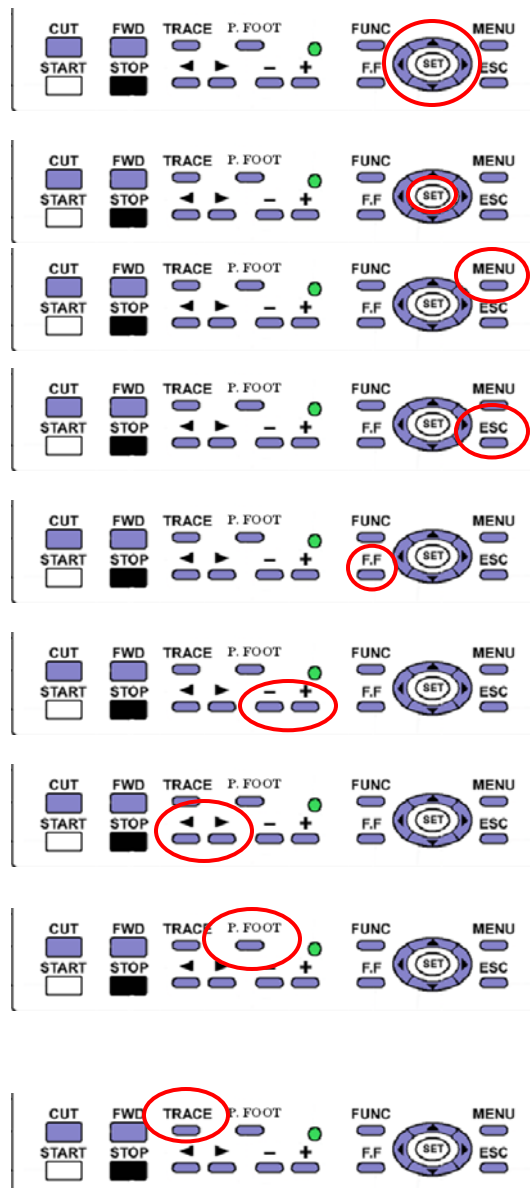
**FF button (Fast Forward):** In conjunction with the arrow keys increases frame movement speed for faster tracking.

**+/- buttons:** Plus/minus buttons increases and decreases the machine embroidery speed.

**ARROR button (Left/Right):** Moves the sewing head in the desired direction. (Moves between needles 1 - 12.)

**P FOOT button:** Raises and lowers the presser foot. (Useful in positioning the needle at a precise point in the design. i.e. after a thread break)  
Process: Lower the presser foot, then manually pull down the needle. Perform a **CUT** to return to normal embroidery position.)

**TRACE button:** Verify that the pattern selected embroiders within the boundaries of the hoop. (See: "Using the **TRACE** function".)



**CUT button:** Cut the upper and lower thread.

**START button:** Start to embroider

Note: If held down while embroidering, the machine temporarily switches into a **super slow mode**. When released the speed returns to the previous embroidery speed.

**STOP button:** Stop the embroidery process. Additional functions are different **Back tracking** modes.

**4 Modes of back tracking:**

**Press once:** Frame moves backwards one stitch.

**Press continuously:** Frame moves backwards continuously.

**Keep pressing continuously:** The button function locks, the frame moves backwards by 1 stitch at a time continuously. Stop button must be pressed to stop.

**Keep pressing longer still:** The button function locks, the frame goes back in multiples of 10 stitches at a time continuously. Stop button must be pressed to stop.

**FWD button:** Forward Tracking

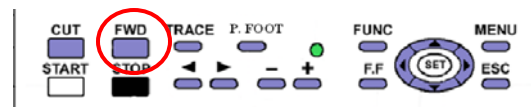
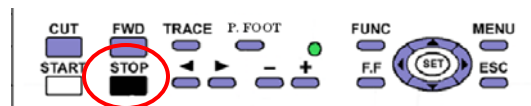
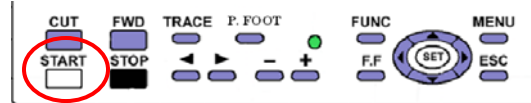
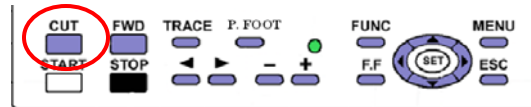
**4 Modes of moving forward in a pattern:**

**Press once:** Frame moves forwards one stitch.

**Press continuously:** Frame moves forwards continuously.

**Keep pressing continuously:** The button function locks, the frame moves forward by 1 stitch at a time continuously. Stop button must be pressed to stop.

**Keep pressing longer still:** The button function locks, the frame moves forwards by multiples of 10 stitches at a time continuously. Stop button must be pressed to stop.



**FUNC button:** The function button opens to a menu with additional functions. Use the arrow keys to move to the desired function and **SET** to execute.

### Explanation of Functions:

**TOP:** Returns frame to the top of the pattern.

**CENTER:** Moves the frame to the center.

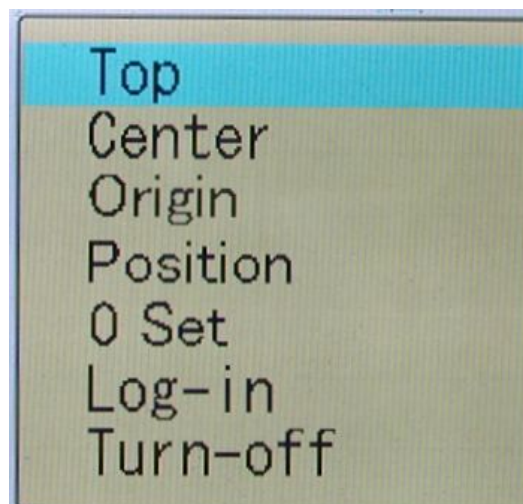
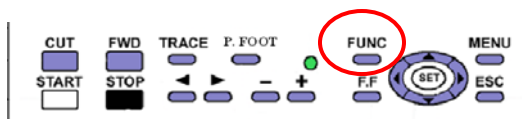
**ORIGIN:** Moves the frame to the start point.

**POSITION:** Moves the frame to the current sewing position.

**O SET:** Not used

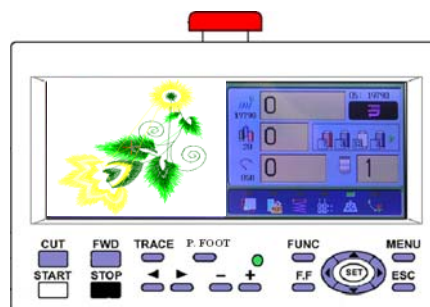
**LOG-IN:** Log-in for LAN network set up.

**TURN-OFF:** Recommended to turn the machine off.

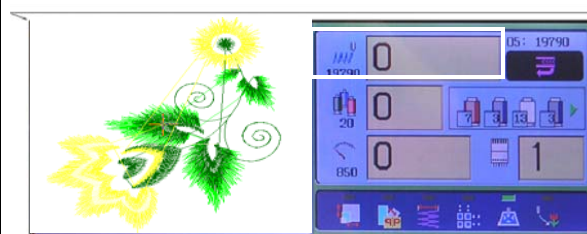


**Description of function**

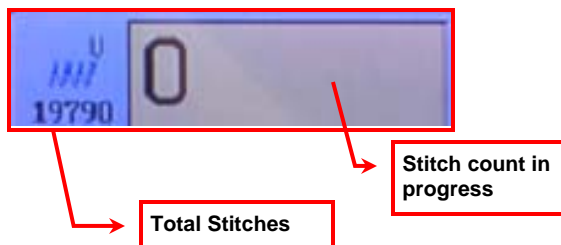
Explaining the drive mode display.



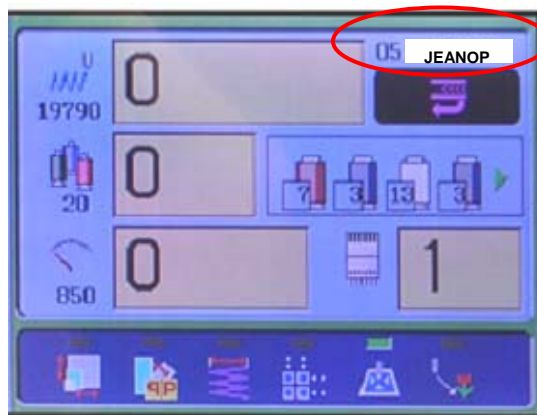
The drive mode is the actual embroidery mode. The embroidery design and its position is displayed in the large left hand display area.



The display shows the amounts of stitches per pattern. And the current stitch count during the embroidery process.



In the upper right hand corner the **location #** of the selected pattern is displayed, along with the **name of the pattern**.



**Color Changes:** The left hand display shows the number of color changes (i.e. 20). The display in the middle shows the current color. The right hand side show the colors remaining.

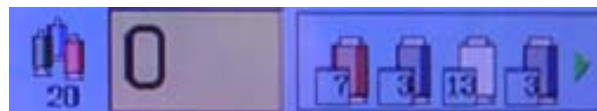
**Note:** If a **color change stop** or a **frame out** is applied the follow Icons appear above the thread spools

**Speed Setting:** The left hand display shows the maximum speed setting. The right hand display shows the actual embroidery speed.

**Currently selected needle:** The left hand display represents the machine embroidery head. The right hand display show the current needle selected.

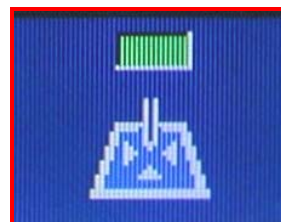
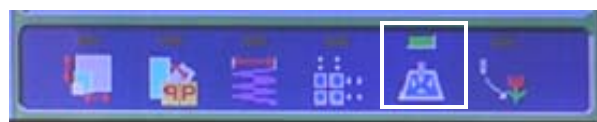
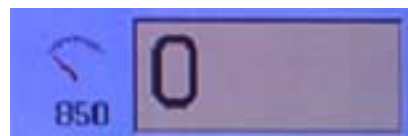
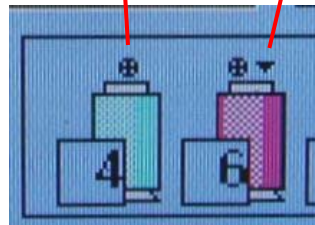
**Indicator Icons:** Along the bottom of the display are Icon representing additional functions that can be applied to a design (Scaling, rotate/mirror image, satin stitch width adjust, repeat pattern, auto origin, and offset.)

Active functions applied/active are indicated with a green bar above the Icon.



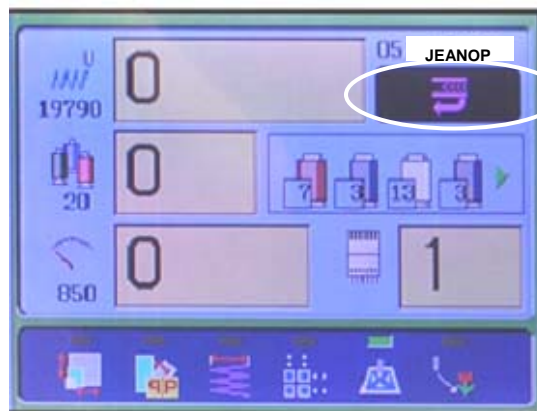
Color stop

Frame out





**Status Icon:** Depending on the machine set up, different icons appear in the upper right hand side.



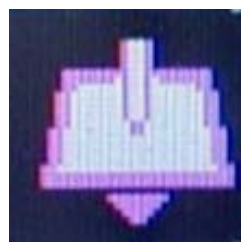
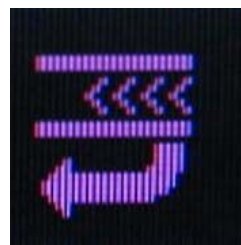
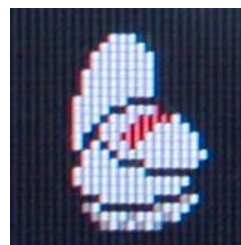
**4 Status Icons:**

**Normal cap frame:** Icon appears when a cap frame is mounted to the machine. (Automatic sensor activation)

**Wide cap frame:** Icon appears when the **wide cap frame** is selected. The frame type is selected in the **OPTION # 17**.

**Top:** The icon show's when the machine is ready to embroider in the regular embroidery mode.

**Frame out:** The frame out icon show's when a frame out has occurred.

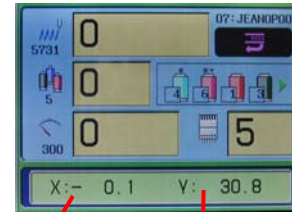


**Additional Display:** When the hoop is offset manually.

Distance moved in millimeters from the start point in the X and Y direction.

Pattern size information in millimeters.

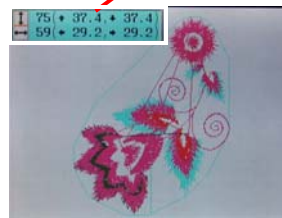
**Note:** If the numbers are equal i.e. 37.4 / 37.4 and 29.2 / 29.2 the design is digitized center/center.



X distance moved from start point.

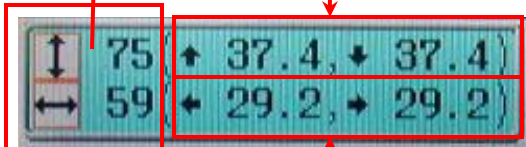
Y distance moved from start point.

Size of Pattern info



Height & width

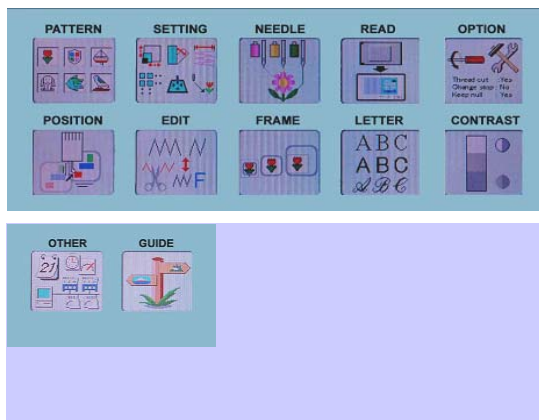
Distance between top and start point.  
Distance between bottom and start point



Distance between extreme left and start point.  
Distance between extreme right and start point.

**Description of function**

Explanation of the **MENU** mode.



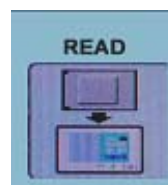
**PATTERN Menu:** View all stored designs, the submenu allows to lock design data, erase a design, choose trace type, rename design, copy designs, and write designs back to a memory card.

**SETTING Menu:** Design manipulations such as resizing, rotating and repeating. Addition features such as satin stitch width, frame out and design offset.

**NEEDLE Menu:** Color selection for the selected design. Submenu allows to choose the colors for each needle, auto needles change sequence and transfer color data from one design to another.

**READ Menu:** Memory management.

**OPTION Menu:** Change design and machine settings.



**POSITION Menu:** Go directly to a specific stitch number, color change or to a repeat pattern design.

**EDIT Menu:** Stitch edit function to manipulate the individual stitches within a design.

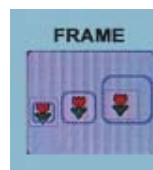
**FRAME Menu:** Frame selection and design placement within a selected hoop.

**LETTER Menu:** Lettering program for basic lettering.

**CONTRAST Menu:** Display screen manipulation such as contrast.

**OTHER Menu:** Calendar and clock settings, network setup, machine initialization, speed initialization and version information.

**GUIDE Menu:** Onboard tutorial guide.

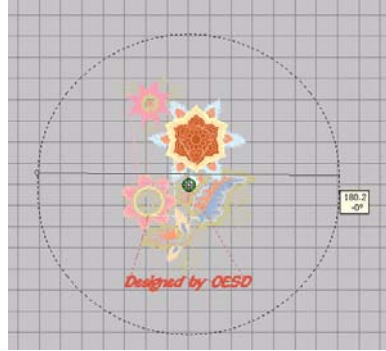


### Metric Dimension Settings

04

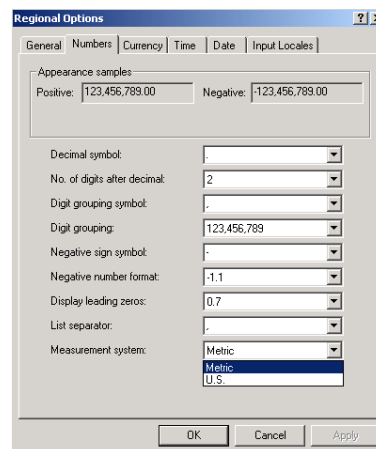
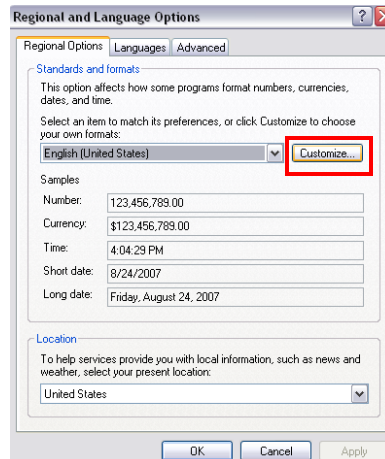
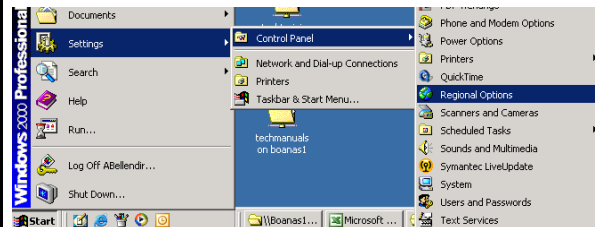
#### Description of function

Changing the computer to metric allows to create hoops in metric dimensions Using the **Bernina Embroidery Software Version 5**. Each square represents 1cm and is compatible with the metric Happy Voyager machine grid.



Before starting **Bernina Embroidery Software Version 5** the computer has to be set to metric dimensions.  
Select **START > SETTINGS > CONTROL PANEL > REGIONAL OPTIONS > CUSTOMIZE > NUMBERS > MEASUREMENTS SYSTEM...** and change to **METRIC** and select **OK**.

Note: You may need to restart your computer.

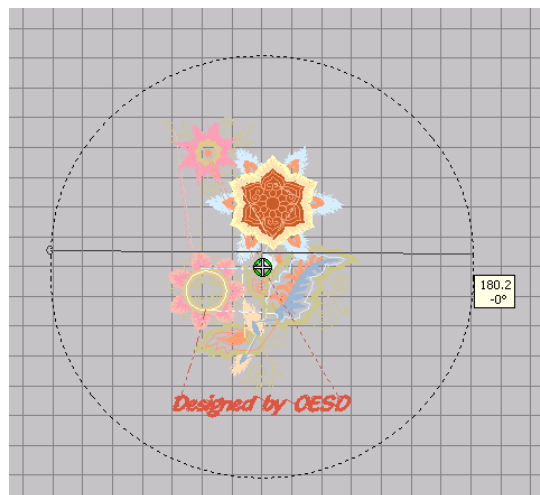


## Create Hoops in Bernina Embroidery Software V5

### Description of function

Create metric hoops that represents the hoops used with the Happy Voyager machine.

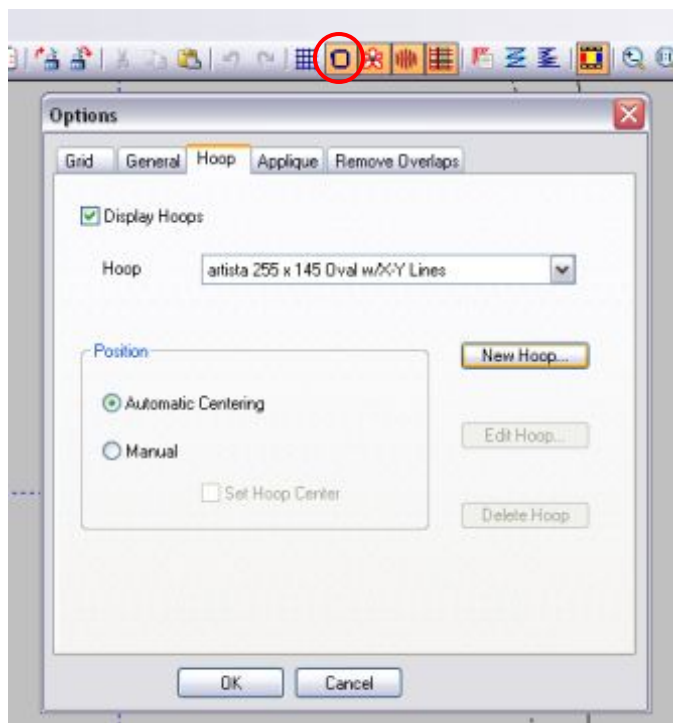
Note: The computer must be set to metric dimensions prior.



Start the **Bernina Embroidery Software Version 5** program.

Right mouse click on the **HOOP ICON**, select **HOOP** and **NEW HOOP**.

Note: The default setting for the design is Automatic Center. This places the design automatically in the center of the hoop.



This example is for creating a 180 mm round hoop.

The current standard hoop sizes of the Happy Voyager machine are: 90mm, 120mm, 150mm and 180mm.

For Format, select **Oval**

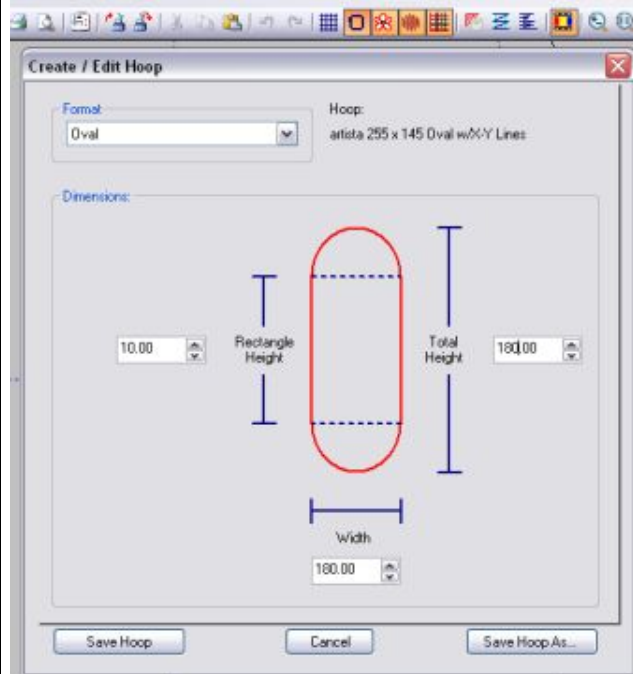
Change the Rectangle height to 10.00

Change the Width to 180.00

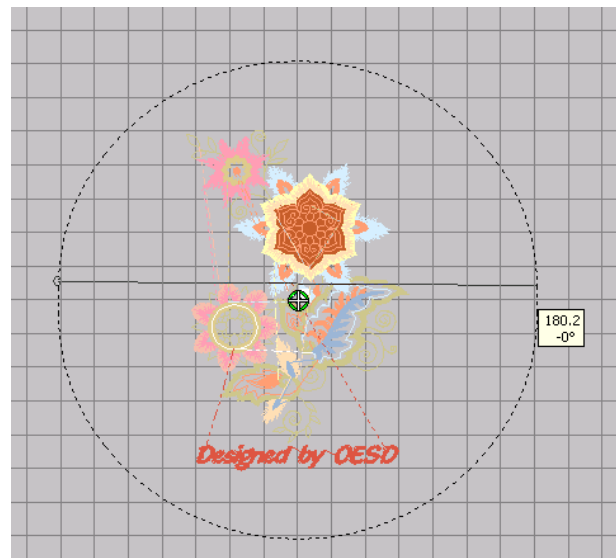
Change the Total height to 180.00

After changing the dimensions, select "Save Hoop As.." to save and give the hoop a name, "Happy 180mm hoop".

Note: If numbers are not accepted, computer is not set to metric dimensions.



The round hoop created in V5 matches the 180mm standard Happy hoop.

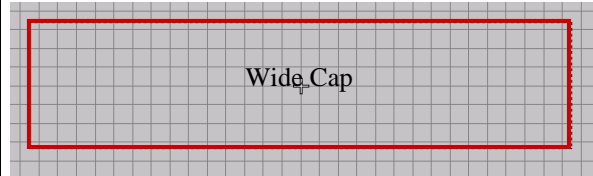
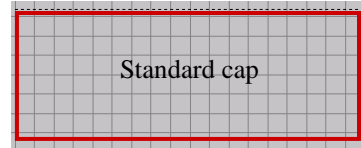


## Create Hoops in Bernina Embroidery Software V5

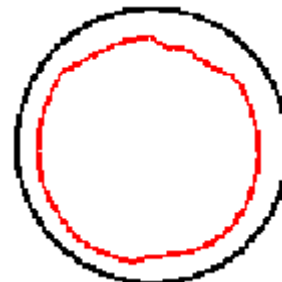
To create a rectangle Cap hoop select the rectangle and adjust the setting for the following sizes:

Happy Standard Cap: 67X 180mm

Happy Wide Cap: 67 X 290mm



Note: The actual sewing area is smaller to account for the presser foot sole. **Always perform a TRACE before embroidering.**





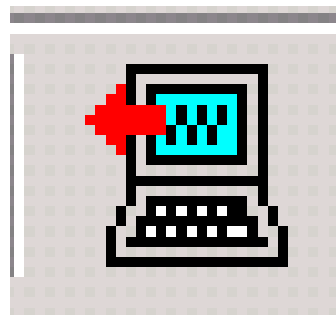
### Transferring Pattern using Happy Link

06

#### Description of function

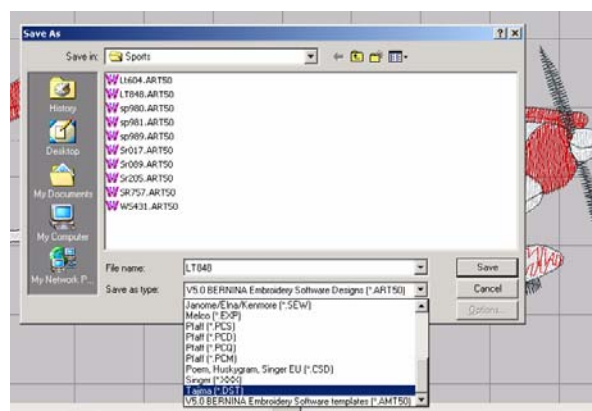
Once a design is in **.dst** format, it can be opened in **Happy Link** and transferred to the machine, using the transfer icon.

Note: The machine must be in the drive mode.

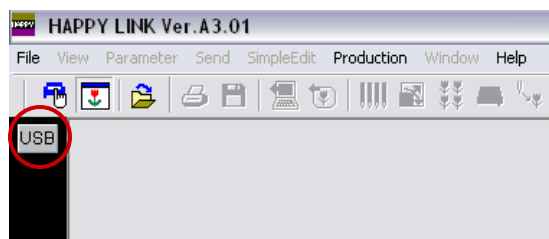


Perform all creations and manipulation in the powerful **Bernina Embroidery Software Version 5**. When satisfied, save design both in **.art** format and **.dst** format.

Only **.dst** and **.tap** formatted designs can be sent and accepted by the **Happy Voyager** machine.



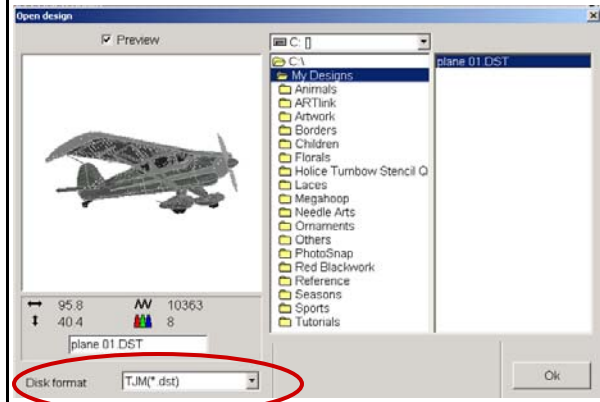
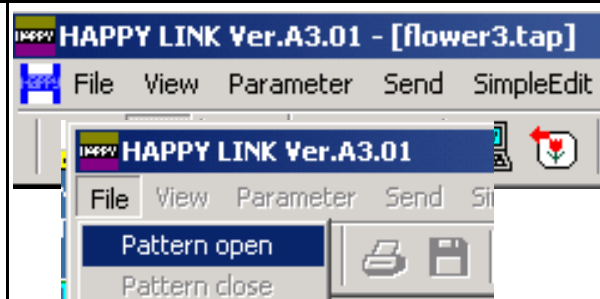
With the computer connected to the machine using a USB AB cable, open Happy link. Happy link will display an **USB** icon indicating that the computer is connected to the machine.



## Transferring Pattern using Happy Link

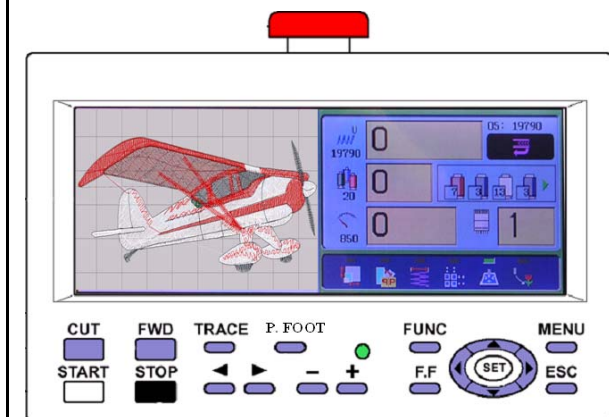
Select **FILE > PATTERN OPEN** to search for a design.

When searching for a design make sure the disk format is set to **.dst**.



Once pattern is selected, use the **TRANSFER** Icon to send the design to the machine.

Note: The machine **must** be in the drive mode for the transfer to take place. (see drive mode as illustrated).

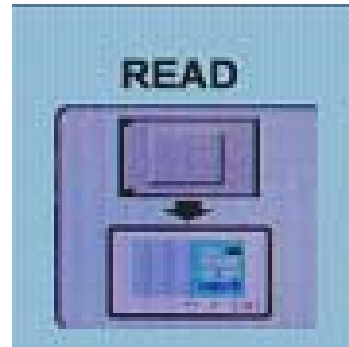


## Transferring Pattern using a Memory Card

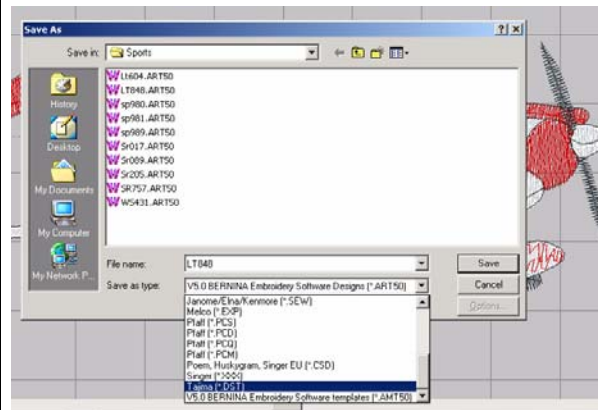
07

### Description of function

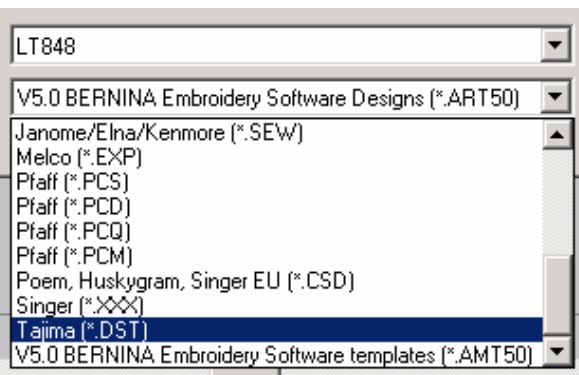
The **READ** menu reads a PCMCIA card or Flash memory cards with adaptors for **.dst** data transfer to the machine.



Perform all creations and manipulation in the powerful **Bernina Embroidery Software Version 5**. When satisfied, save design both in **.art** format and **.dst** format.



Note: Only the **.dst** and **.tap** formatted designs can be sent and accepted by the **Happy Voyager** machine.



## Transferring Pattern using a Memory Card

07

Using a PCMCIA card/adaptor greater than 16Mb (Recommended 256Mb) copy the saved .dst design to the card.

Note: Machines updated to firmware version 1.05 accept 1Meg memory cards.

Note: Card format is **FAT**.

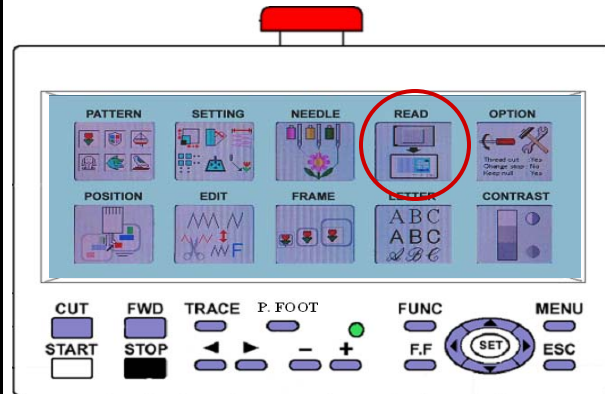


Carefully insert memory card into the machine.



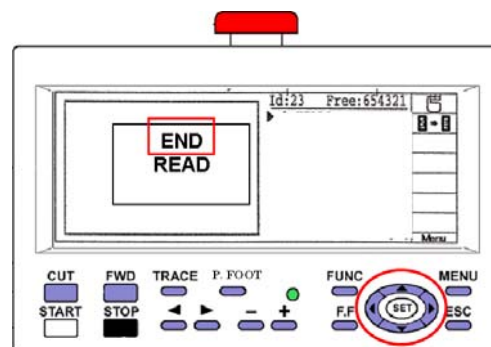
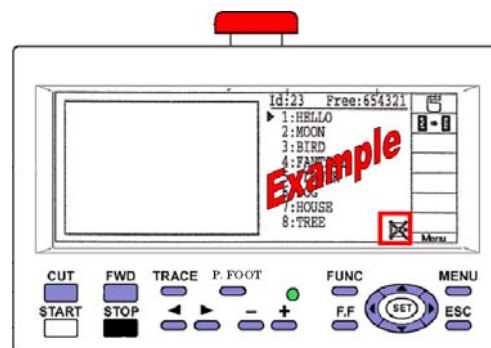
## Transferring Pattern using a Memory Card

Select the **READ** menu using the arrow and **SET** keys.



The machine displays the names of the designs on the card. Using the arrow and **SET** keys, select the design to be copied to the machine. Additional designs can be copied by selecting **READ**. When finished copying, select **END** to exit.

Note: Do not remove card until exited out of the **READ** menu.



## Transferring Pattern to a Card

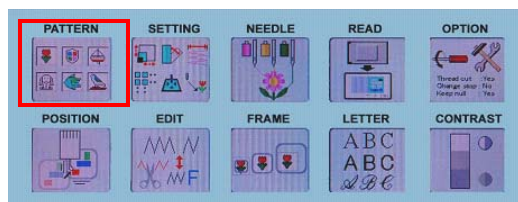
### Description of function

The **TRANSFER** menu option allows the user to send designs from the machine to a PCMCIA card. All design specific settings are transferred.

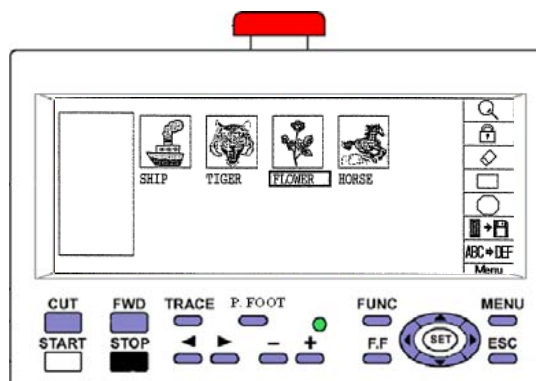
Note: When sending a file to the machine it can be in several formats (Such as .DST). Designs Saved back to a card from the machine are saved only in .TAP format. (.HP1 format is not used)



Select **PATTERN** and press **SET**.



Select the pattern for **TRANSFER** to the PCMCIA card.



## *Transferring Pattern to a Card*

Use a PCMCIA card/adaptor greater than 16Mb  
(Recommended 256Mb)

Note: Machines updated to firmware version 1.05  
accept 1Meg memory cards.

Note: Card format is **FAT**.

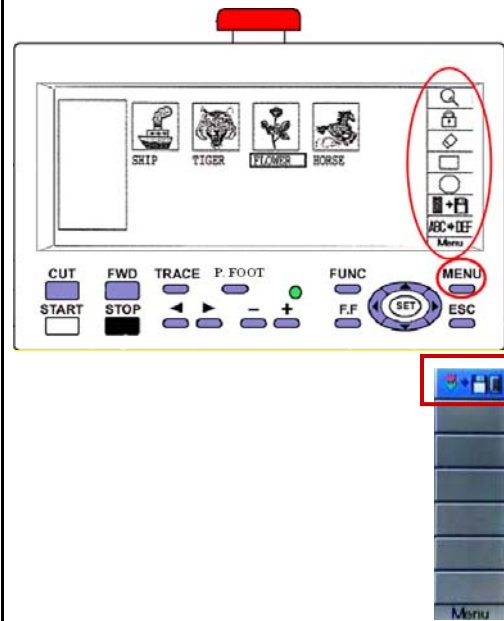


Carefully insert memory card into the machine.

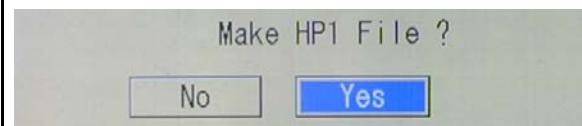


## Transferring Pattern to a Card

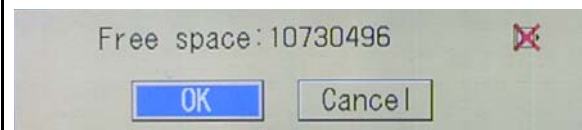
Select **MENU** use the down arrow key to move down pass the last submenu icon for the **TRANSFER** function icon, press **SET**.



Message, "Make a HP1 File?" Select **YES** and press **SET**.



Checks for free space on the card and then display. Select **OK** and press **SET**.



Rename the pattern or press **SET** to accept as is.



Writing the pattern to the card.

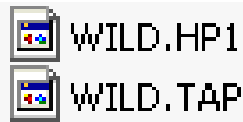




## Transferring Pattern to a Card

The design saved creates 2 files, one with a "HP1" extension, and one with a .TAP extension.

Note: Only the .TAP extension is a valid file extension.



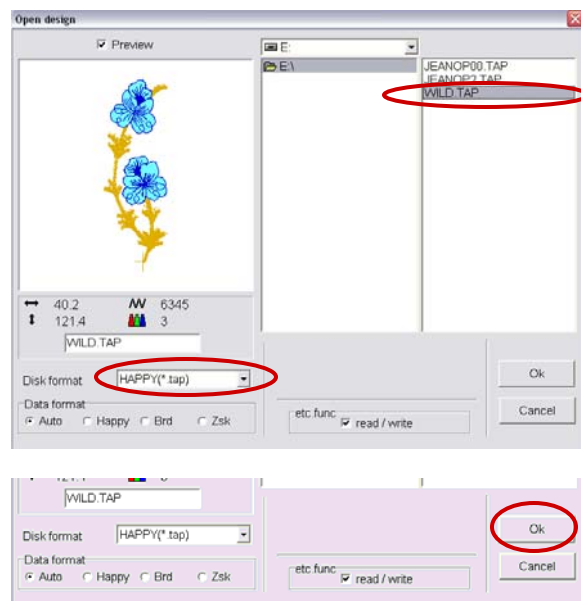
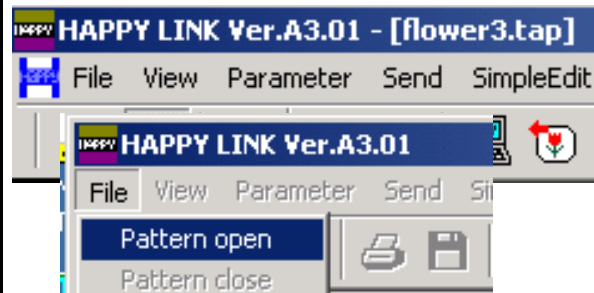
Open Happy link.

Select **FILE > PATTERN OPEN** to search for a design.

Saved machine design on the card can only be displayed and retrieved as a .TAB file extension.

The **V5** embroidery software can not read the .TAB file extension.

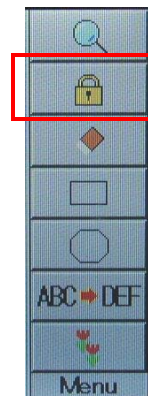
Select "Ok" to open design in Happy link.



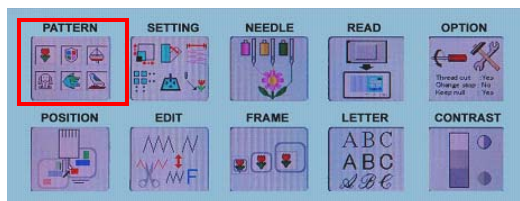
## Locking Pattern

### Description of function

The **LOCK** pattern data menu option prevents accidental changes or deletions.

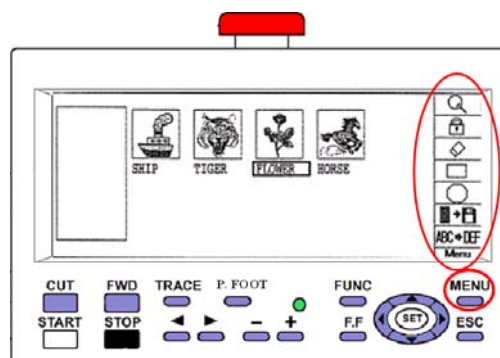


Select **PATTERN** menu, press **SET**.

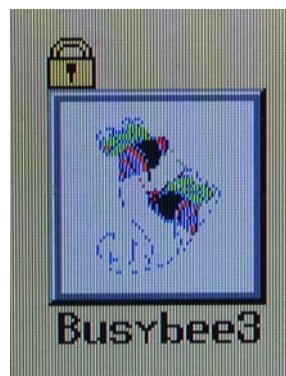


Using the arrow keys select a design and select **SET**.

Select **MENU** again use the down arrow key to move to the **LOCK** function.



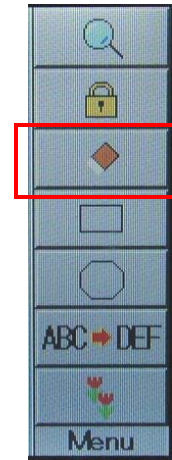
By pressing set a **LOCK** appears above the design. To remove the lock repeat the process.



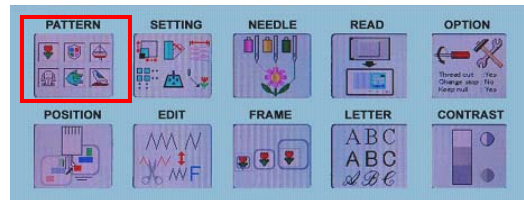
## Deleting Pattern

### Description of function

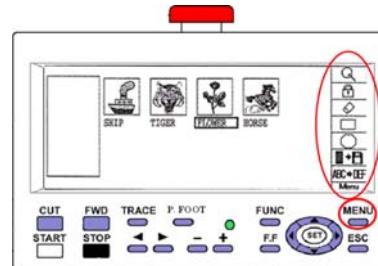
The **ERASING** menu option allows to delete patterns from the machine.



Select **PATTERN** and press **SET**.



Select **MENU** use the arrow key to move to the **ERASE** function, press **SET**.



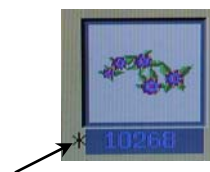
Select the **ERASE** function by pressing **SET**, the following screen appears.

SET : Select / MENU : All / ESC : Execute

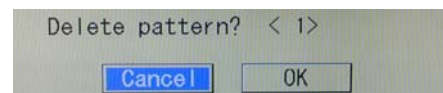
Use the arrow keys to mark the design for deletion, select **SET**.

Select **ESC** to execute, select **OK** and press **SET** to delete design.

Note: If the **MENU** is selected all designs will be marked for deletion.



Note: If all designs are deleted most Icons/ Functions in the **MENU** screen are disabled. By loading one design all functions will be reactivated.



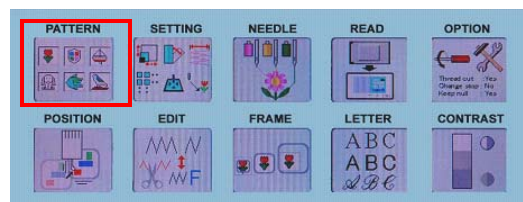
## Selecting a Design from Memory

### Description of function

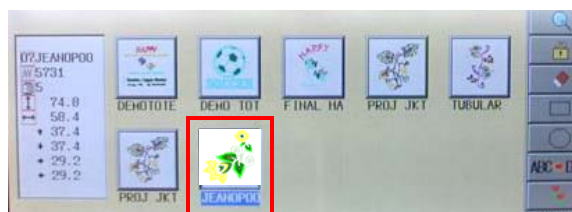
Pattern (designs) are stored in the pattern menu. Up to 99 patterns or 250,000 stitches.



Select **PATTERN** and press **SET**.

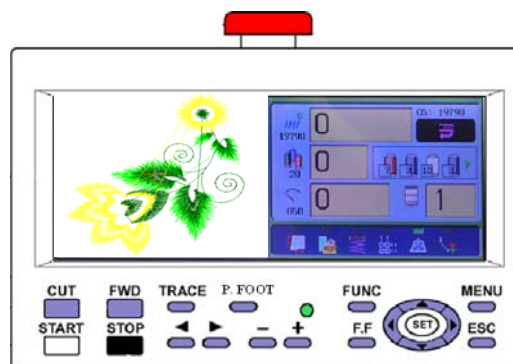


Select a **PATTERN** by using the arrow keys to move to the pattern desired. Press **SET** to select that pattern.



Select **ESC** to exit back to the menu mode, select **ESC** again to return to the drive mode.

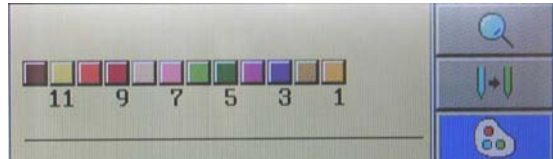
Pattern is now displayed in the drive mode screen.



## Programming Thread Colors for the Needles

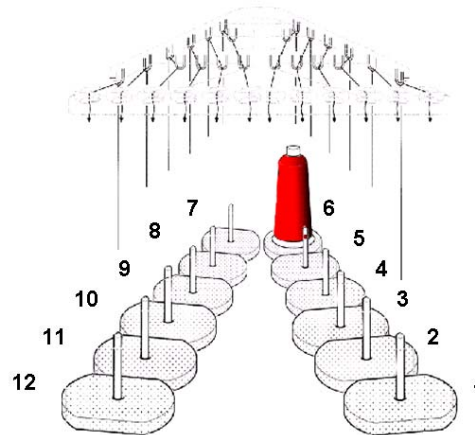
### Description of function

With the thread color option select the colors that represents the colors that are loaded on the spool pins of the machine.

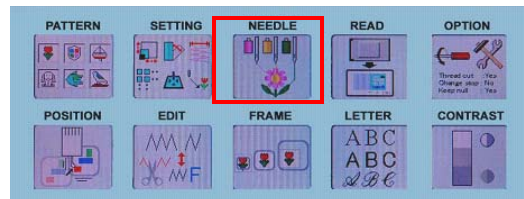


The needle # 1 is on the front right hand side. The far back position is for the bobbin thread.

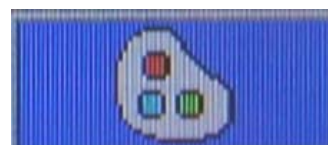
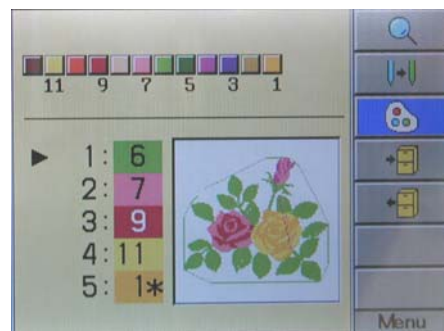
Place threads on thread stand. Generally, place most common color threads (Primary colors) right next to each other (for example in position # 5,6,7 and 8). This eliminates lengthy needle/color jumps for example from position 1 to 12 to 5 etc.



Select **NEEDLE** menu, press **SET**.



Select **MENU**, using the arrow keys move to the **PALETTE** menu and select **SET** to enter.



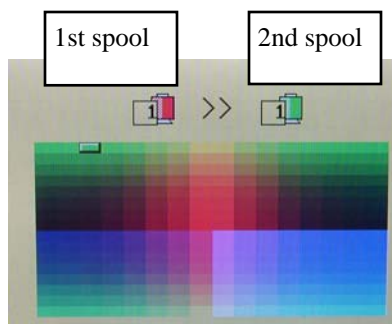
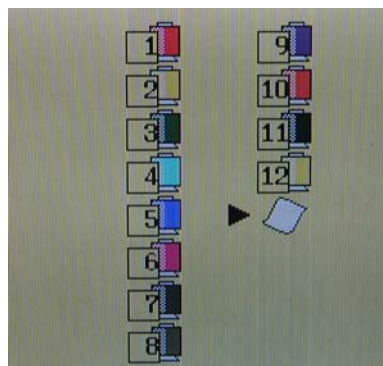
## Programming Thread Colors for the Needles

Needles 1 through 12 should be set up so that they represent and match the colors on the machine. The last icon represents the contrast color for better color definition.

Use the up/down arrows to move among the needles. Select **SET** to enter color change area.

The first spool icon represents the color currently selected, the second spool icon represents the changed color.

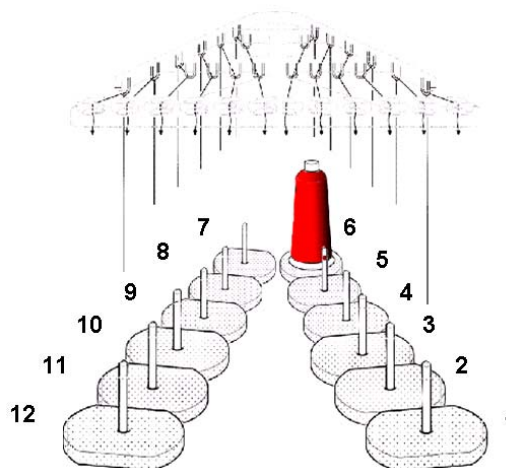
By using the arrow keys move among the palette to locate a color that represents the actual spool color on the machine. Select **SET** to accept the changes.



Continue to select the colors for each needle until the needle colors 1-12 match up with the spool colors on the machine.

Press the **ESC** key to exit the submenu.

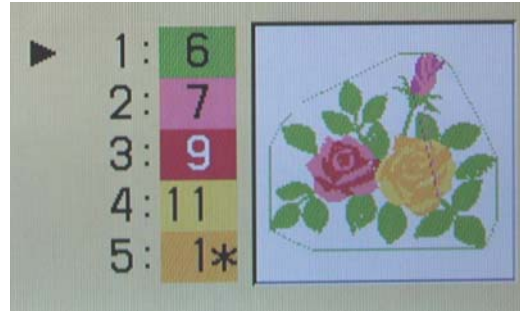
Select **ESC** to exit the needle menu.



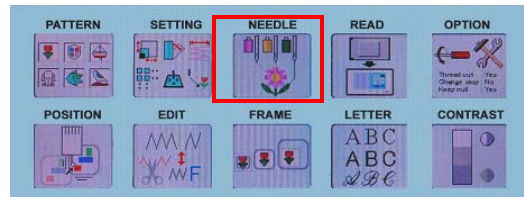
## Programming Thread Colors for the Designs

### Description of function

In the needle menu, select the color and the sequence for the color in the displayed design.



Select **NEEDLE** menu, press **SET**.



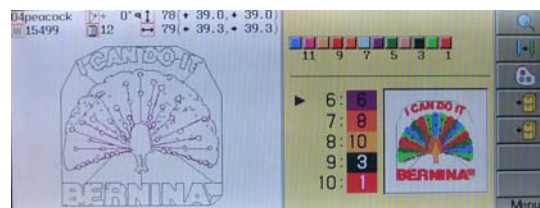
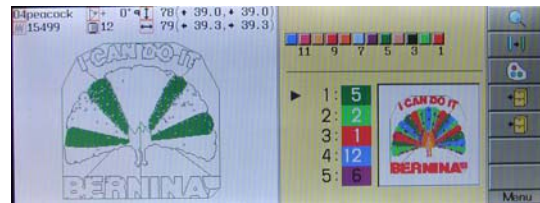
Explanation: The first set of numbers are the color sequences in the pattern. The second set of numbers are the needles (thread colors) allocated for that color sequence.

Use the up/down arrow keys to move among the color sequences.

Use the right/left arrow keys to change the needle (color)

Note: Scroll down past the 5 colors for additional allocations.

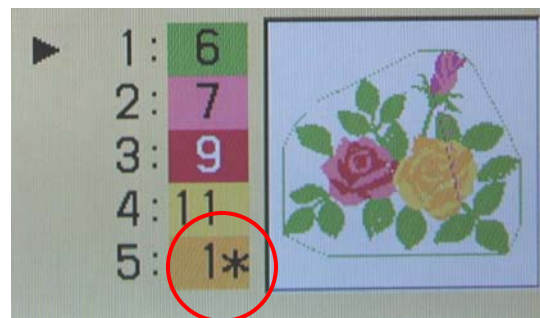
Note: Needle number 0 means no needle has been chosen. The machine will stop waiting for a selection.



When selecting **SET** a \* will appear next to the needle number. This is a **COLOR STOP** after finishing this color the machine stops. Remove the color stop pressing **SET** again.

If a **diamond** is next to the needle number, that means that a **FRAME** out has been applied to that color sequence. After sewing out that color the machine will stop and the frame will move to a determined position. See Happy Voyager user/operator manual.

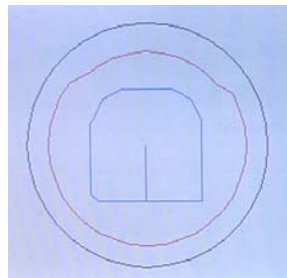
Select **ESC** to exit.





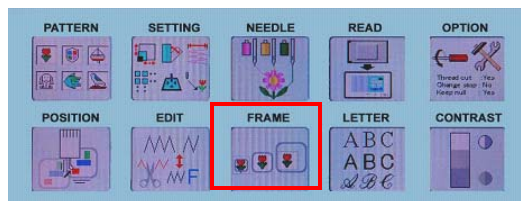
**Description of function**

The **FRAME** menu allows the user to select a representation of the hoop placed on the machine to visually position the design within the hoop. It also allows to create customized round and square hoops.

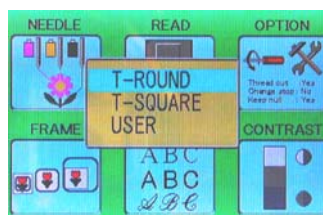


Select **FRAME** menu and press **SET** to enter.

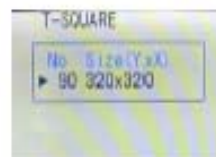
If Message “Check the top of pattern data” select **OK**.



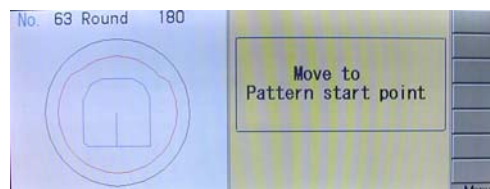
Select the appropriate hoop type (Round or Square) , press **SET**.



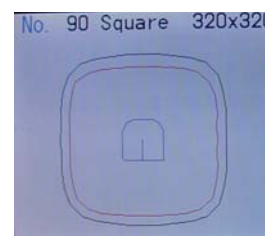
Select the hoop size, press **SET**.



Design is placed in the center of the hoop.

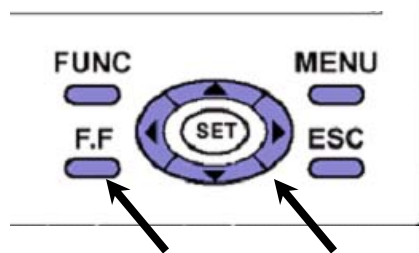


The most outer ring presents the boundary of the hoop. The red inner outline represents the safe embroidery area. The pattern is by default in the center and is represented in blue.

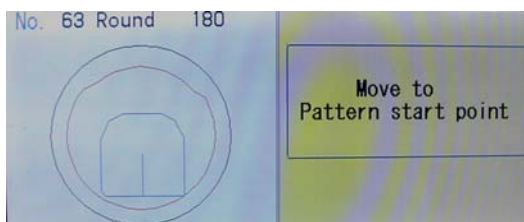


## Positioning the Design in the Hoop/Creating Hoops

Use the arrow keys with the **FF** (Fast Forward) key to move the pattern to the desired embroidery location, select **SET** to accept.

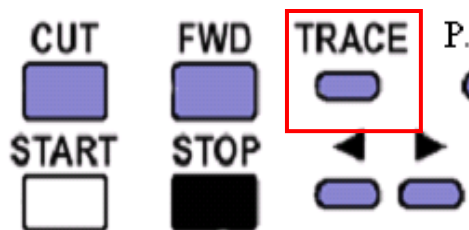


Only place the pattern within the red boundary area.



Select **ESC** to exit the frame menu, and **ESC** again to return to the drive menu.

Always perform a **TRACE** before starting to embroider to make sure the presser foot stays within the inside parameter of the hoop.

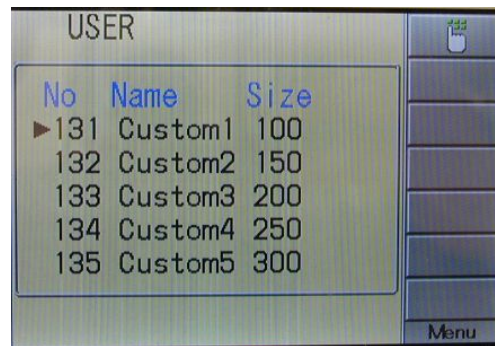
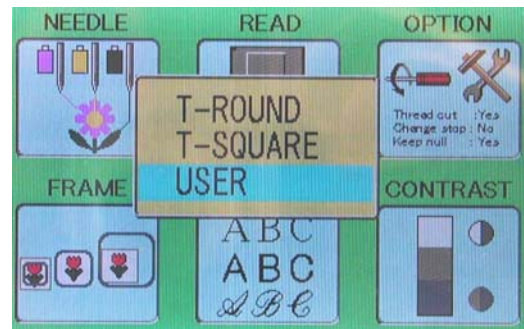


### Creating Custom Hoops

In the **FRAME** Menu select **USER**

In the **USER** section there is the ability to custom create 5 additional hoops to use for positioning a design.

Select one of the 5 hoops using the up/down blue arrow keys.



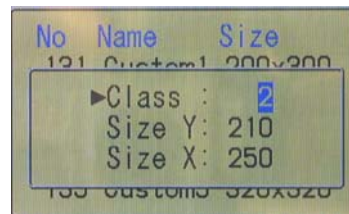
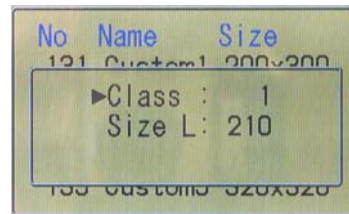
Select **Menu** to get to the sub menu area. Select the **HAND** icon by pressing **SET**.

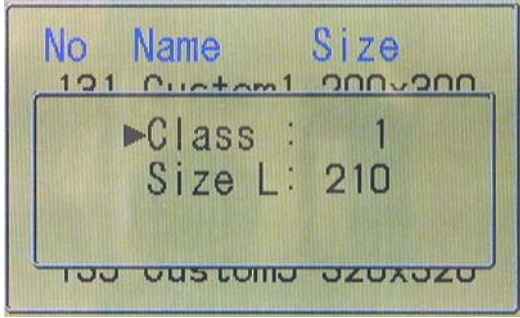
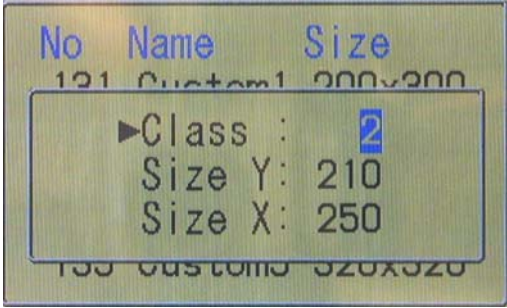
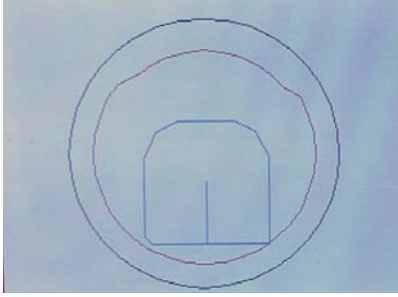


Select **Class** by pressing **SET**.

Use the blue arrow keys to choose between 1 and 2.

- **Class 1 is for Round Type Hoops**
- **Class 2 for Rectangle Type Hoops**



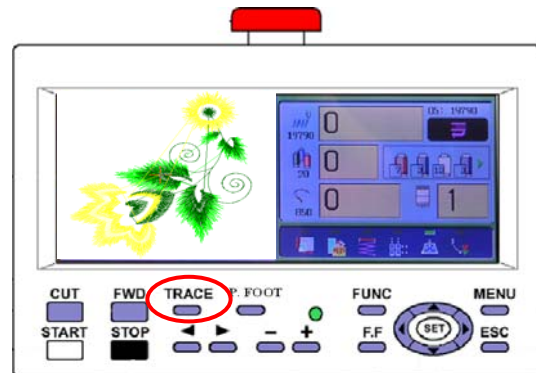
<p><b>Round Type Hoops</b></p> <p>Select <b>Class 1</b> , press <b>SET</b>.</p> <p>Press, <b>SET</b> to enter the <b>Size</b> area.</p> <p>Change the number to represent the hoop size you wish to use for a Round Hoop.</p> <p>Press, <b>SET</b> to save your change and <b>ESC</b> to exit the submenu.</p> <p>Note: Remember the largest round hoop to fit the HV machine is 210mm.</p>	 <p>The screenshot shows a menu with columns 'No', 'Name', and 'Size'. The first row is '121 Custom1 200x200'. A submenu is open showing '▶Class : 1' and 'Size L: 210'. The second row of the main menu is '133 Custom2 320x320'.</p>
<p><b>Rectangle Type Hoops</b></p> <p>Select <b>Class 2</b> , press <b>SET</b>.</p> <p>Press, <b>SET</b> to enter the <b>Size Y</b> area.</p> <p>Change the numbers to represent the height size you wish for the hoop. Press <b>SET</b> to accept.</p> <p>Press, <b>SET</b> to enter the <b>Size X</b> area.</p> <p>Change the numbers to represent the Length size you wish for the hoop. Press <b>SET</b> to accep</p> <p>Note: Equal values in the Y and X filed represent a square hoop, uneven values represent a rectangular hoop. Remember the largest Square hoop to fit the HV machine is Y = 320mm and X = 320mm</p> <p>Select <b>ESC</b> to exit the submenu.</p>	 <p>The screenshot shows the same menu as above. The submenu is open showing '▶Class : 2', 'Size Y: 210', and 'Size X: 250'. The '2' in 'Class : 2' is highlighted.</p>
<p>Once the hoop is created. Select the hoop and position the design in the hoop the same as described earlier.</p>	 <p>The diagram shows a blue square design with a vertical line down the center, positioned inside a circular hoop. The hoop is outlined in red and blue.</p>

## Using the Trace Function

### Description of function

The trace function is used to verify that the pattern selected embroiders within the boundaries of the attached hoop.

**It is Very important to perform a TRACE before sewing out a pattern !!!**



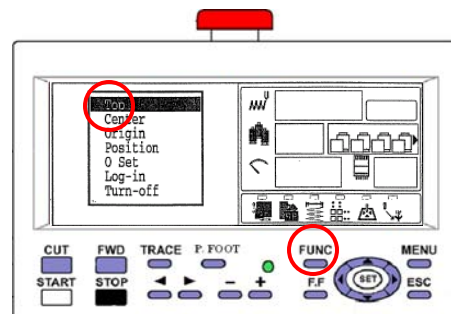
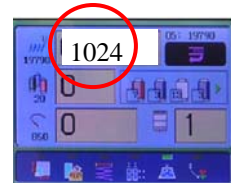
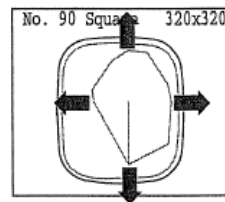
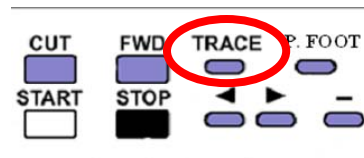
Perform a trace by pressing the **TRACE** button.

The frame (Hoop) begins tracing the pattern (Design) within the hoop.

Visually observe the hoop and the front/back of presser foot and check to make sure the presser foot is within the perimeter of the attached hoop.

Once the trace is done, the stitches count of 1024 stitches is displayed.

To perform a 2nd trace, select **FUNCTION, Top** and select **TRACE**.

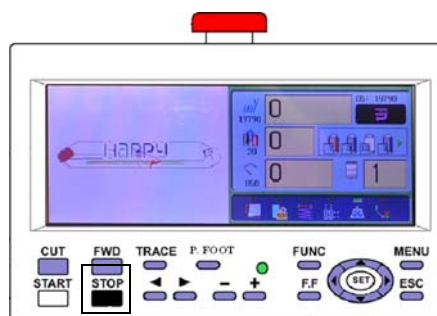


**Description of function**

The **STOP** button is also used as the **BACK TRACK** button which allows backtracking within the design.



For example, if a thread break occurred use the **STOP** button to back track a few stitches past where the breakage occurred.



Note: The **STOP** and **FWD** buttons have several modes.

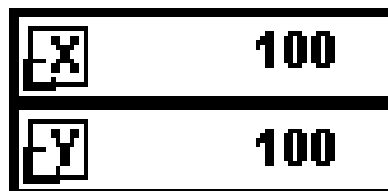
- Press once – moves by one stitch
- Press continuously - beep indicates the new mode to move continuously
- Keep pressing - moves continuously by 1 stitch until the **STOP** button is pressed.
- Pressing longer still - moves continuously by 10 stitches until the **STOP** button is pressed.



## Scaling the Size of the Pattern

### Description of function

The scaling options allows to rescale in the X and in the Y direction down to 50% and up to 200%.

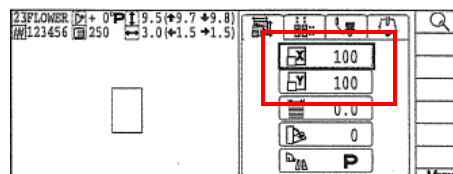


Select **SETTING** press **SET** to enter setting menu. Using the arrow keys, arrow down to the X scaling option. Select **SET** to choose. Use arrow keys up down to change value. Select **SET** to accept the change.

Using the arrow keys, arrow down to the Y scaling option. Select **SET** to choose. Use arrow keys up down to change value. Select **SET** to accept change.

Note: There is no stitch processor, stitches will be compressed or expanded. Use the scaling function for minor corrections in the **+ - 20%** range.

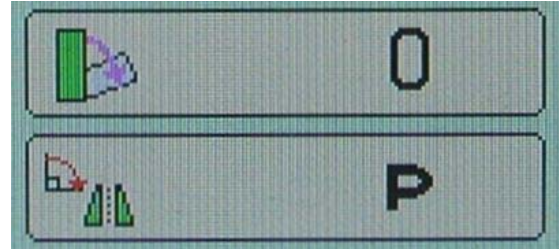
Select **ESC** to exit back to **MENU** mode.



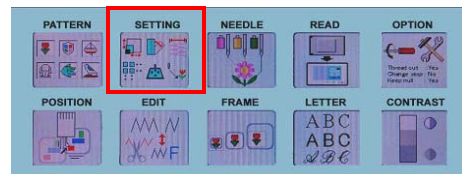
## Rotating /Mirroring the Design

### Description of function

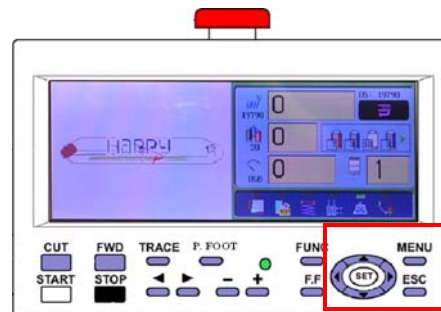
Rotate a design in single 1degree increments, 90 degree increments or in mirror image motions.



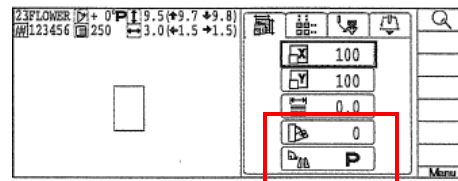
Select **SETTING** press **SET** to enter setting menu.



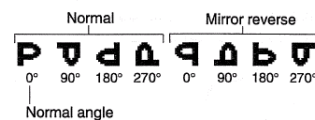
**To rotate by degrees:** Using the arrow keys, arrow down to the angle option. Select **SET** to choose. Use arrow keys up down to change value. Select **SET** to accept change.



**To rotate by 90 degrees or to mirror:** Using the arrow keys, arrow down to the Convert design option. Select **SET** to choose. Use arrow keys up down to change position of design. Select **SET** to accept change.



Select **ESC** to exit back to **MENU** mode and Select **ESC** again to return to drive mode.





## Adjusting the Stitching Width (Pull Compensation)

### Description of function

The width adjusting option allows to increase or decrease satin stitch from + 1.0mm to -1.0 mm in size.

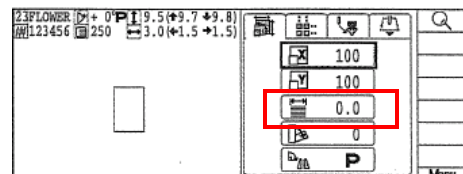
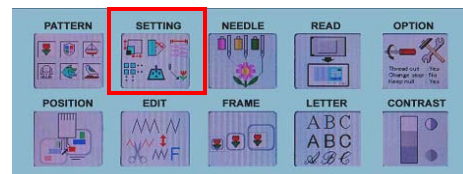
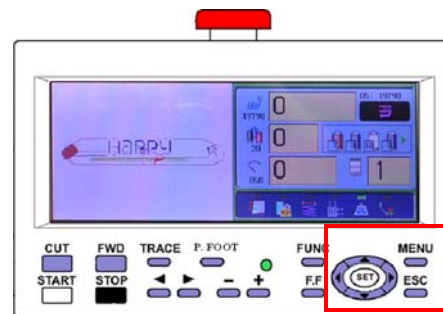
Min -1.0mm

-

Max +1.0mm

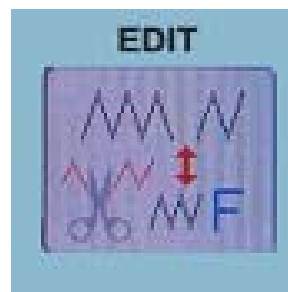
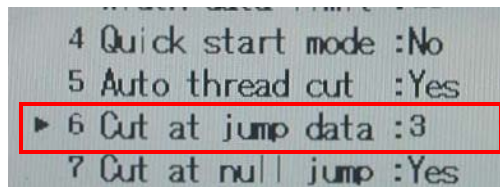


Select **MENU** then using the arrow keys move to **SETTING**, press **SET** to enter setting menu. Using the arrow keys, arrow down to the width adjust option. Select **SET** to choose. Use arrow keys up down to change value. Select **SET** to accept change. Select **ESC** to exit back to **MENU**.



## Removing Unwanted Jump Stitches

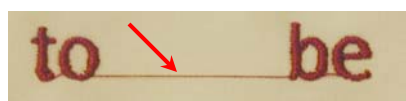
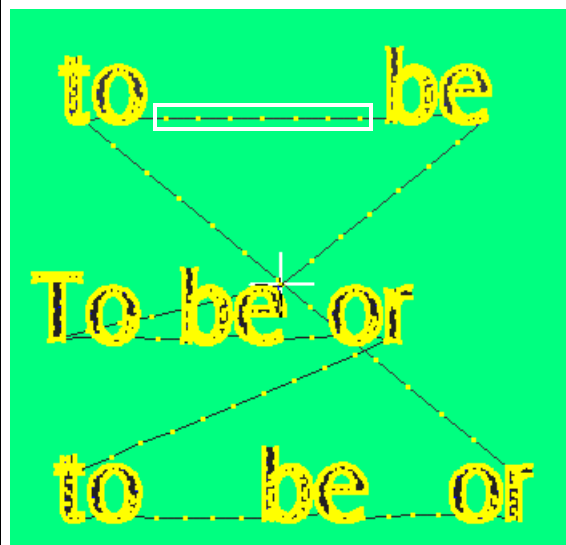
**Description of function:** Unwanted jump stitches can be eliminated by changing the settings of the cut at jump data option in the **EDIT** menu.



### Explanation:

Cut at jump data setting eliminates for example the jumps stitches between two words.

Example, the jump stitch setting is at 7. If the machine counts 7 or less jump stitches between the letters the jumps will not be cut. If the machine counts more than 7 jump stitches the thread will be cut.

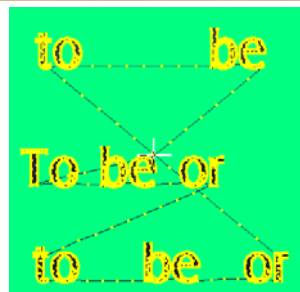
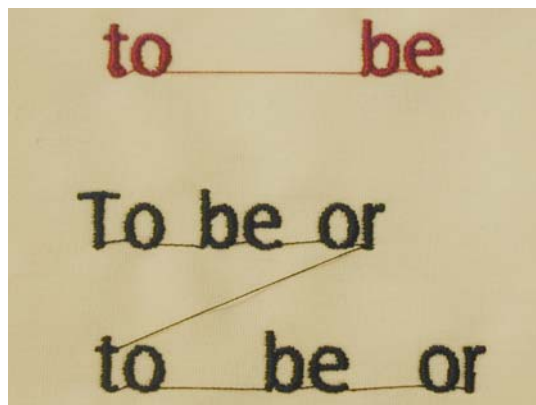


## Removing Unwanted Jump Stitches

### Explanation of Issue:

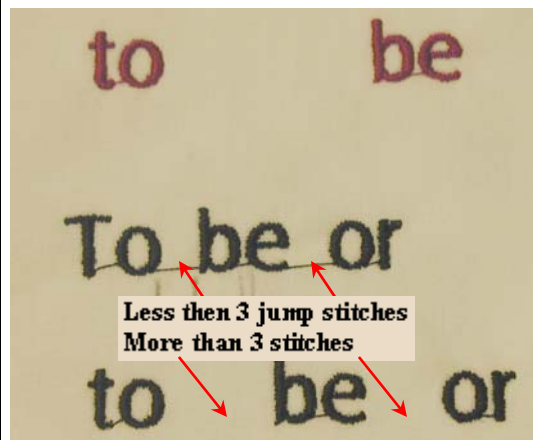
If cut at jump data is set to "0", no stitches will be cut. (The thread cuts between the different color changes is not effected.)

Note: While jumping between to———be the needle bar is disengage and causes a loud clanking noise!



### Explanation of Issue:

If cut at jump data is set to "3", which is the default setting. All stitches with more then 3 jumps will be cut, those with less then 3 will not be cut.

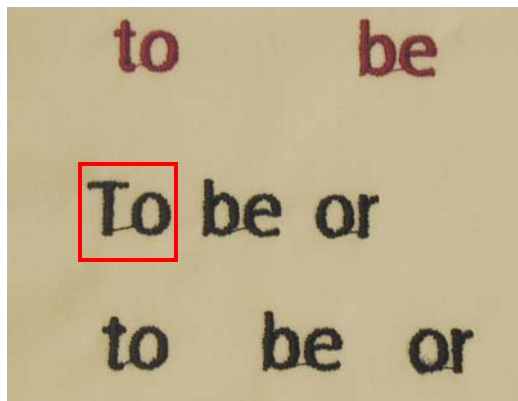


Jump stitch

## Removing Unwanted Jump Stitches

### Explanation of Issue:

If cut at jump data is set to "1". All stitches with more than 1 jump will be cut, the only threads left are those that do not have an actual jump stitch in them.

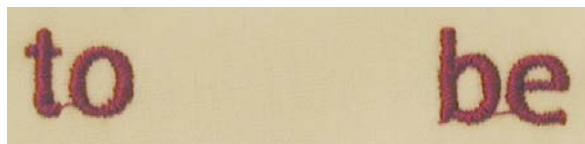


No actual jump stitch

Actual jump stitch

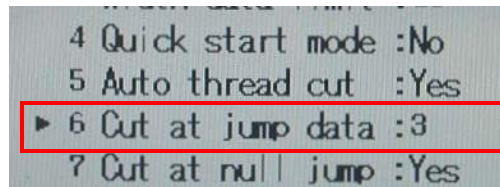
### Explanation of Issue:

Use the features in the EDIT mode to remove stitches if no actual jump stitch are present.

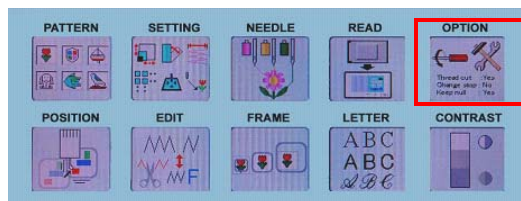
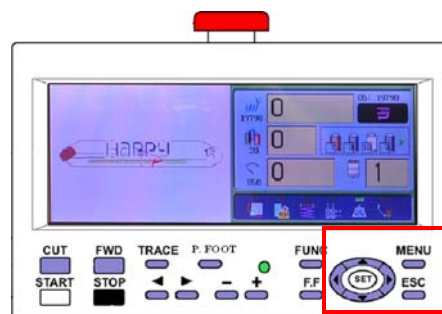


## Removing Unwanted Jump Stitches

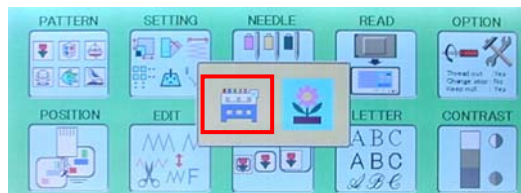
**Description of function:** By changing the setting of the cut at jump data option and using the **EDIT** menu unwanted jump stitches can be eliminate



Select **MENU** then using the arrow keys move to **OPTION**, press **SET**.



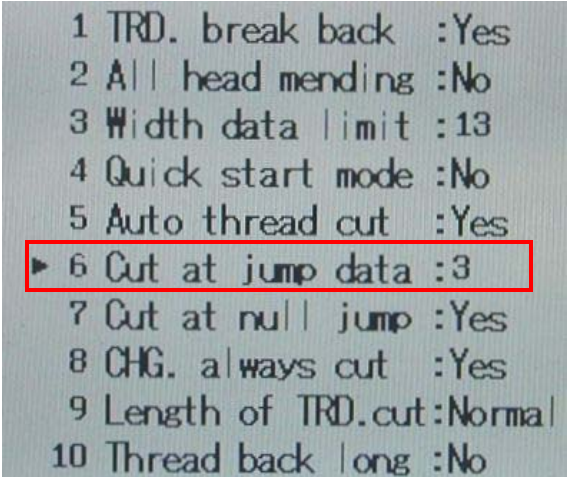
After selecting **OPTION**, two icons appear, the one on the right is for machine options and the one on the left is for pattern options. Select the left **Machine Icon** and press, "Set".



**Removing Unwanted Jump Stitches**

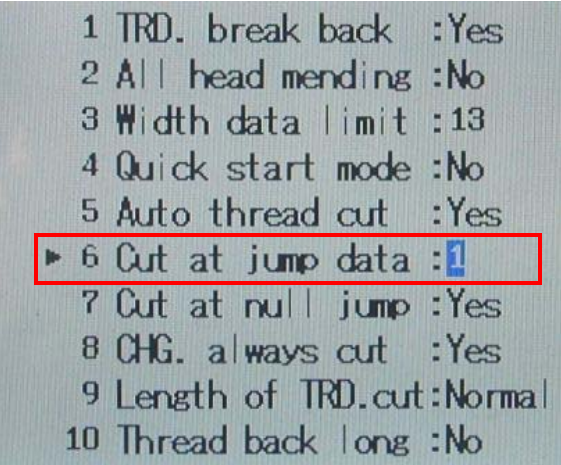
20

Select "6 Cut at jump data" by using the arrow keys and pressing **SET** .



1 TRD. break back :Yes  
2 All head mending :No  
3 Width data limit :13  
4 Quick start mode :No  
5 Auto thread cut :Yes  
▶ 6 Cut at jump data :3  
7 Cut at null jump :Yes  
8 CHG. always cut :Yes  
9 Length of TRD.cut:Normal  
10 Thread back long :No

Using the arrow keys, change value to "1". and select **SET**. Now all actual jump stitches will be cut. Select the **ESC** key two times to return to the drive mode.



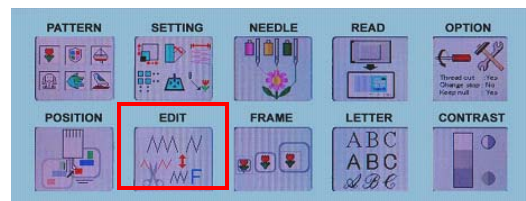
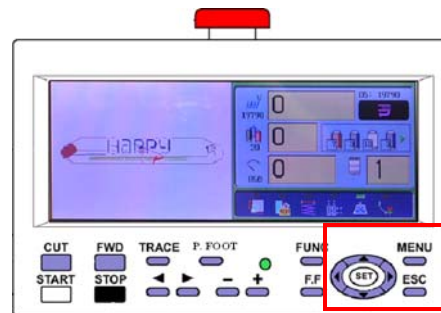
1 TRD. break back :Yes  
2 All head mending :No  
3 Width data limit :13  
4 Quick start mode :No  
5 Auto thread cut :Yes  
▶ 6 Cut at jump data :1  
7 Cut at null jump :Yes  
8 CHG. always cut :Yes  
9 Length of TRD.cut:Normal  
10 Thread back long :No

## Removing Unwanted Jump Stitches

**Description of function:** In the **EDIT** mode by changing the setting of the cut at jump data option unwanted jump stitches can be eliminate.

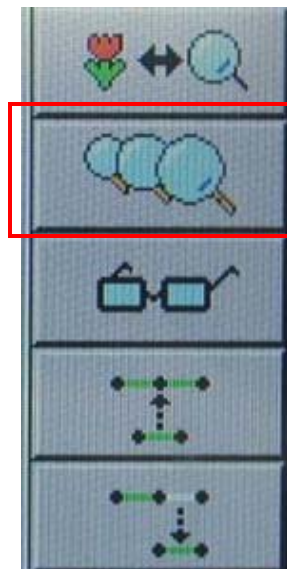


Select **MENU** then using the arrow keys move to **EDIT** press **SET** to enter Edit menu.

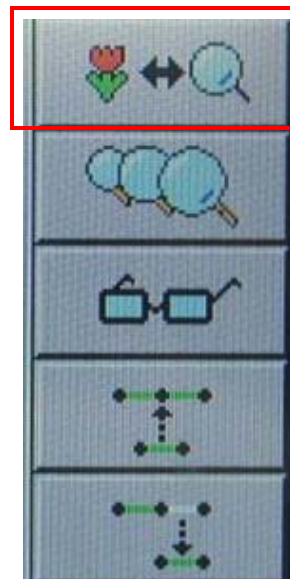


## Removing Unwanted Jump Stitches

Select **MENU** for the submenus. Use up or down arrow keys to select "Zooming rate". Select **SET** to change. (Suggest change to 200 % or 400 % magnification.)



Select **MENU** for the submenus, use up or down arrow keys to select "Zoom in for the display". Select **SET** to apply magnification that was selected.



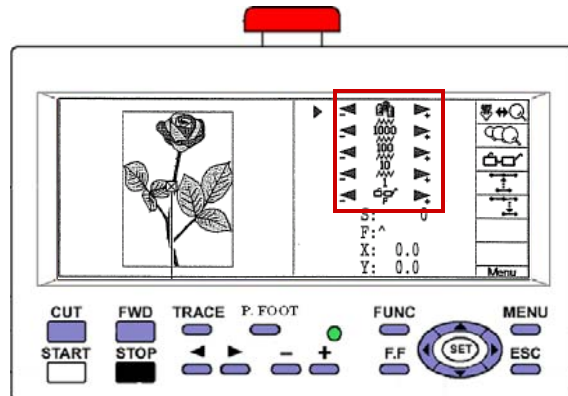


## Removing Unwanted Jump Stitches

Use up or down arrow keys to select the move by features.

Move by:

- Color
- 1000 stitches
- 100 stitches
- 10 stitches
- Single stitch
- Function (moving by function, select **MENU** in the submenu, choose the eyeglasses, then chose the function to move by. Move by 0 stitch, 0 jump, jump, speed, cut, stop and end.



Use the right arrow key to move forward in the pattern and the left arrow key to move back in the pattern. Move to the stitch just before the thread to be trimmed, press **SET** the **F** section becomes active, then use the up and down arrows select **CUT**, then press **SET** to apply.

Additional function can be applied, such as:

End **end point**

Chg **color change**

Stp **stop**

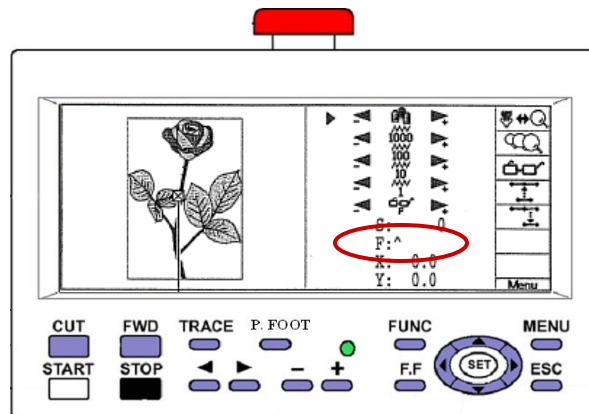
Cut **cut**

Spm **speed limit medium (300rpm)**

Sp2 **speed limit medium (800rpm)**

Sp1 **speed limit high (1000rpm)**

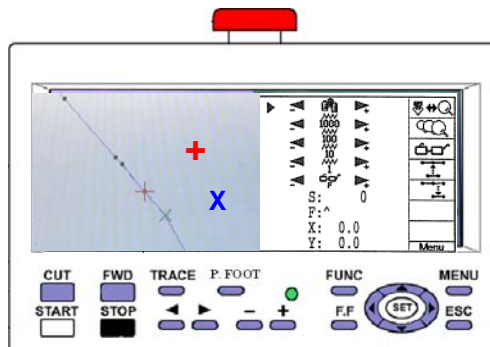
Sph **release speed limit**



## Removing Unwanted Jump Stitches

Once a cut is applied (red “+”), the next stitch is marked with a blue “X”. (The one before the unwanted thread trail.) Continue process until all unwanted thread trails are removed.

When finished, Select **ESC**, “Finish editing mode?” Use the arrow key to move to **Yes** and select **SET.X**



The unwanted thread is cut.



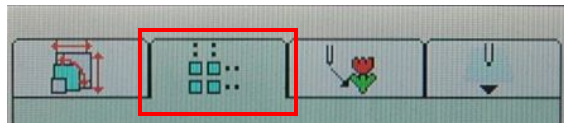
Thread Removed

## Embroidering Multiple Designs

### Description of function

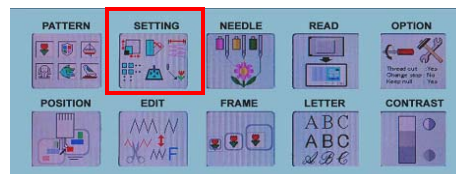
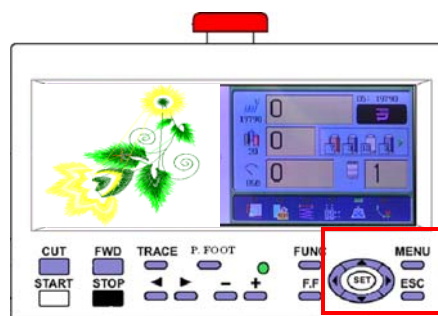
In the repeat sewing option patterns can be arranged and repeated a number of times

Note: This allows for multiple copies of the same design embroidered in one hoop.



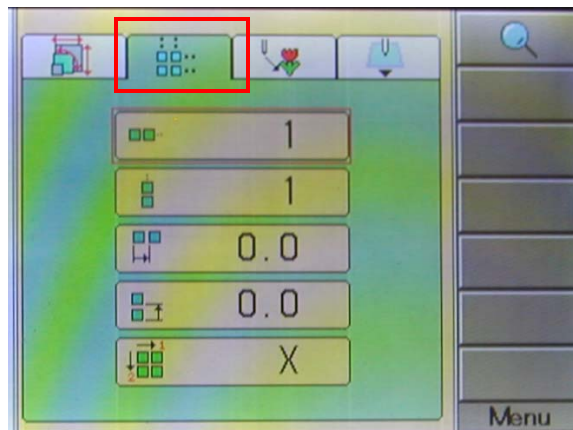
Select the pattern, be aware of the size of the pattern in respect to the hoop size and whether the multiplied pattern will be able to fit within the hoop.

Select **MENU** then using the arrow keys move to **SETTING**, press **SET** to enter setting menu.



## Embroidering Multiple Designs

Use the right arrow key to move to the **REPEAT SEWING ICON** area.



Explanation of settings:

Number of pattern repeat in the X direction

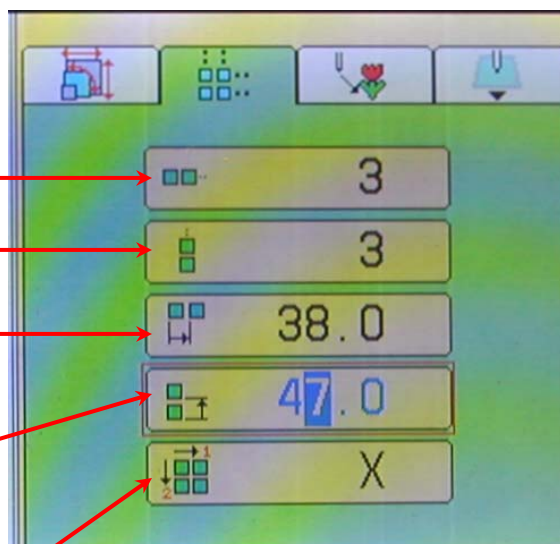
Number of pattern repeat in the Y direction

Distance between start point of each pattern in the X direction. (Patterns spread out in X direction.)

Distance between start point of each pattern in the Y direction. (Patterns spread out in Y direction.)

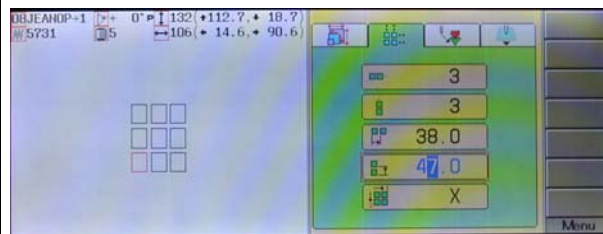
Priority of embroidery directions:

- X - left/right priority
- Y - up/down priority



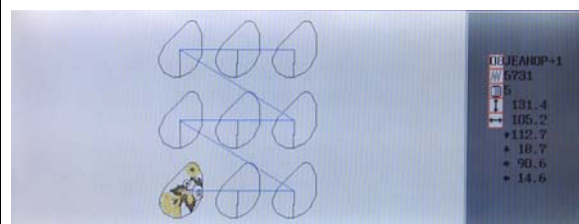
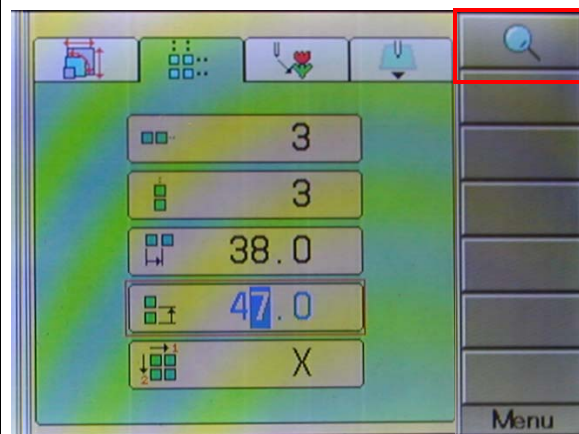
## Embroidering Multiple Designs

The arrow up and down keys moves to the different settings, select **SET** to activate the setting. Use the up and down arrow keys to change the value. Select **SET** to accept that setting.



To view the multiple patterns select **MENU** and select the Magnifying glass by pressing **SET** Select **ESC** to return to the Setting menu.

Select **ESC** again to exit the **SETTING** menu.

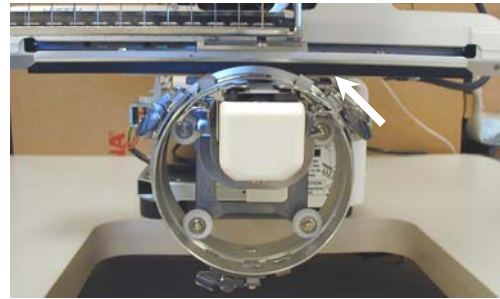


## Installing the Cap Device/Machine Set Up

Install the cap frame driver to the machine according to manual.

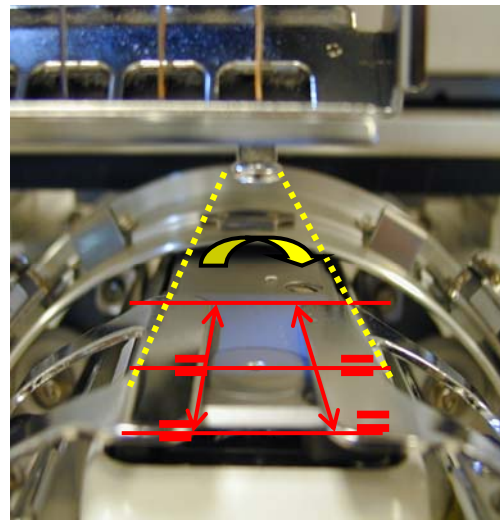
Note: Important the machine has to be in the off position when installing the cap frame device.

**Warning:** When installing the cap frame be careful not to damage the actuating lever underneath the right hand side of the X carrier. (see arrow)



Note: Important, prior to turning on the machine, manually rotate the cap frame ring to line up the marked dotted line (see picture) in respect the needle plate. Move the entire arm to line up the marked arrows in respect to the needle plate.

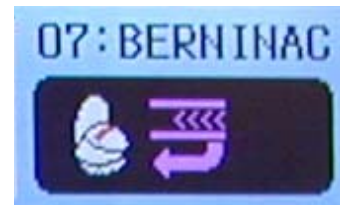
Turn on the machine.



## Installing the Cap Device/Machine Set Up

With the cap frame driver mounted, the embroidery design is automatically turned upside down and a cap icon is displayed in the upper right hand corner of the screen.

Note: If the cap icon is not displayed check the actuating lever mentioned in the previous page.



Note: When using the cap frame a selection of the cap frame type must be selected. (Normal or Wide frame)

Select **OPTION** , press **SET**.

After selecting **OPTION** , two icons appear, the one on the right is for machine options and the one on the left is for pattern options. Select the **Machine Icon** and press, "**Set**".

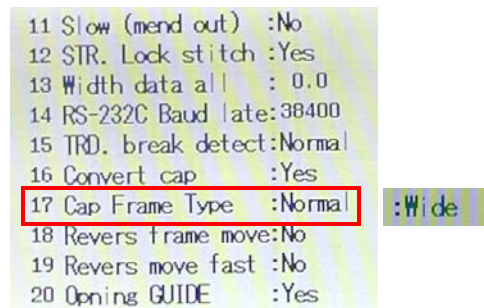
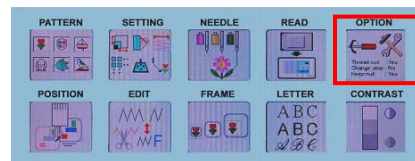
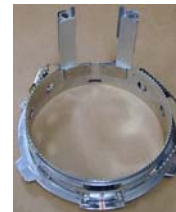
Use the down arrow key to move to **17 Cap Frame Type**. Press **SET** to activated, use the up/down keys to change, press **SET** to accept change. Select **ESC** to exit the frame menu and **ESC** again to return to the drive menu.

In the drive mode next to the cap icon a **W** is displayed.

**Note:**

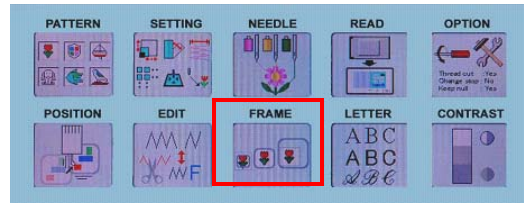
The **Normal** cap represents a 67mm x 180mm embroidery field

The **Wide** cap represents a 67mm x 290mm embroidery field



## Installing the Cap Device/Machine Set Up

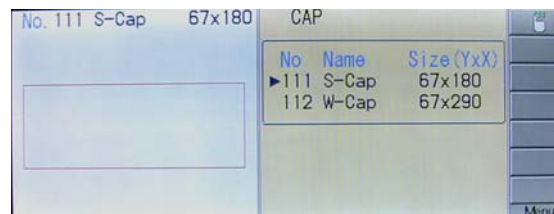
To position pattern inside the cap frame, select **FRAME** press **SET**.



Press **SET** to accept cap.



Use the up/down arrows to chose between the 111S-Cap (Standard) and the 112W-Cap (Wide). Press **SET** to accept.



Standard Cap Frame



Wide Cap Frame



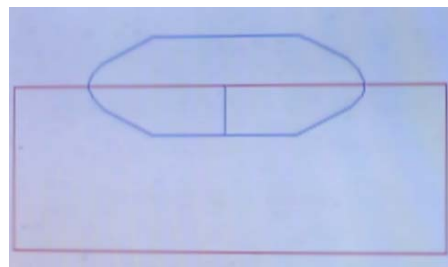
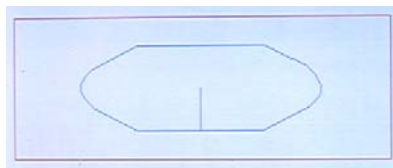


## Installing the Cap Device/Machine Set Up

Explanation: The outer outline (red) represents the safe embroidery area of the hoop. The pattern is represented in the inside the frame (blue).

Only place the pattern within the red boundary area.

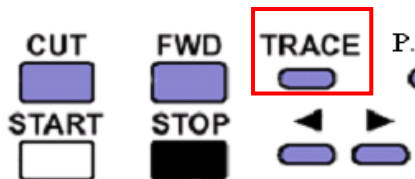
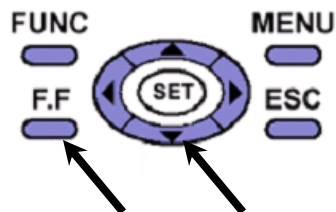
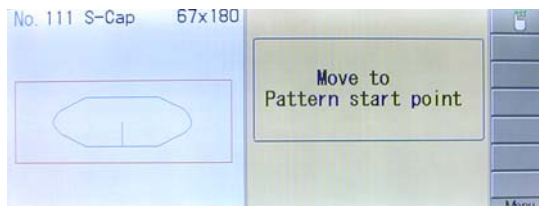
**Note: Always perform a TRACE prior to embroidering.**



Use the arrow keys with the **FF** (Fast Forward) key to move the pattern to position the design and select **SET**.

Select **ESC** to exit the frame menu, and **ESC** again to return to the drive menu.

Always perform a **TRACE** before starting to embroider to make sure the presser foot stays within the inside parameter of the hoop.



### Description of function

Interchangeable Tubular Clamping System (ITCS)  
 The clamping capability of the ITCS allows embroidering with many, otherwise "un-hoop-able or difficult to hoop" items, such as suit cases, leather etc. The ITCS are available in a large (ITCS2) or small (ITCS1) chassis size, each with an assortment of window sizes that are quickly and easily exchangeable without the use of tools.

**Warning:** Extra precaution must be taken when using this device:

- Never turn on the machine with the Interchangeable Tubular Clamping System installed.
- Only install the ITCS after the machine has calibrated its **X & Y** position.
- Do not performing power fail recovery with ITCS installed.
- Only move the **X & Y** position or **TRACE** with the Clamping System closed
- Just in case, be prepared to hit the red panic button during the **TRACE and any X & Y OFF-SET executions.**



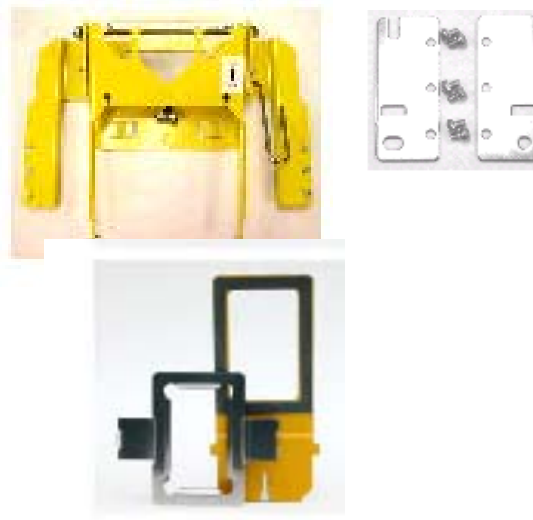
The ITCS is a effective device to efficiently embroider - bags - CD cases - jackets - leather - canvas - quilted goods - computer bags - back of caps, etc.



Basic clamping system requires 3 items:

1. Interchangeable Tubular Clamping System (Either ITCS 1 small or ITCS 2 Larger )
2. Set of Tubular arms (Brackets)  
 Arm ITCS 2 , model 1201
3. Window insert to fit the clamping system and most appropriate for the embroidery task.

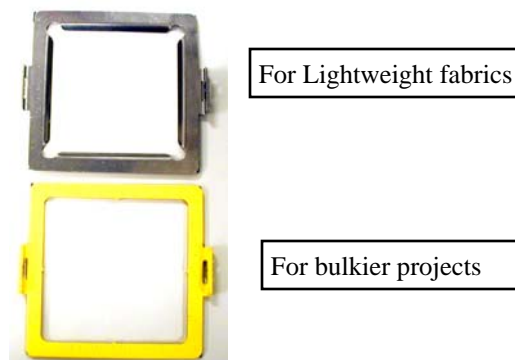
Note: Additional window insert for each Tubular Clamping System are available.



Some window kit contains two upper windows and a lower window.

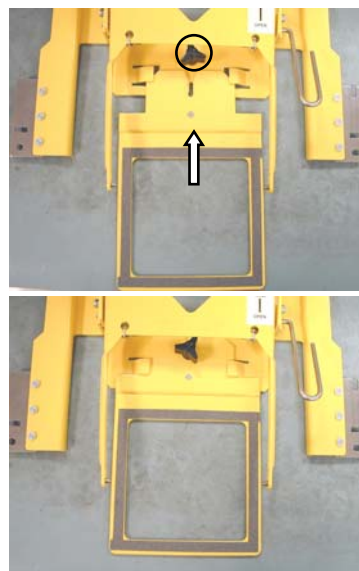


Two styles of upper window inserts, one of these will be of shiny metal construction for lightweight fabrics, the other yellow upper window is for bulkier projects.



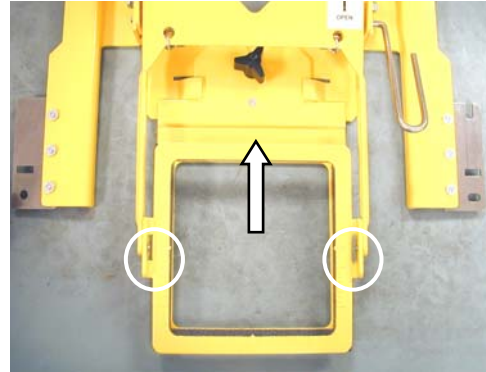
Install the lower window into the clamping system by first loosening the thumb screw in the center of the clamping system and slide-in the lower window under the two hooks in the base until it stops.

Hold window in place and tighten the black thumb screw to secure the lower window.



## Installing the Hoop Tech Device/Machine Set Up

Install the upper window by slipping the retaining hole over the pivot pin on the right hand side and gently pulling the left arm outwards to engage the hole on the opposite side of the upper clamping window.



Install the brackets on the clamping system.

Note: Screws for the brackets are accessible from the bottom.

Note: Right side bracket is marked with a U-shaped cutout.



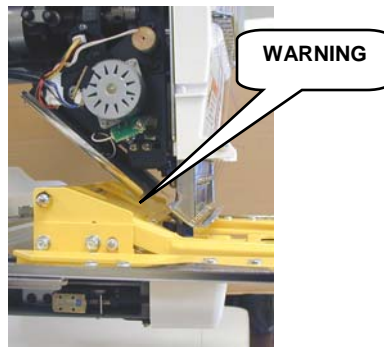
Correctly assembled bracket



Installing the Clamping system onto the machine.

**Warning !! Never power up machine with ITCS unit installed. Always remove prior to turning the machine on.**

**Failure to do so may result in physical interference between the ITCS and the machine!!**

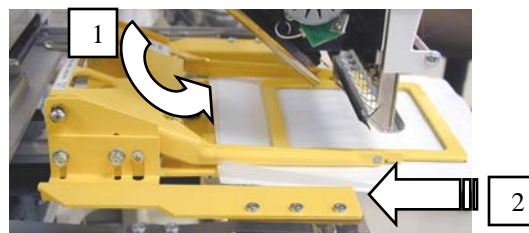


To install, turn on machine, select set to initialize the machine. (**ESC** if tutorial menu is displayed.)

Move the pentagram, using the **FF** and arrow function all the way to the rear most position.

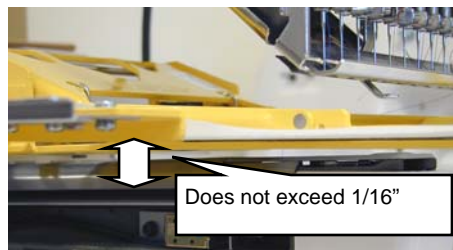
Slide the clamping system in from behind (1) and then clamp into frame holders. (2) (See picture)

Make sure the locking pins of the arm snap cleanly into the holes of the clamp bracket.



Adjust the Tubular Clamping System height using the two nuts on both the right and left side of the clamping system so that the clamping system:

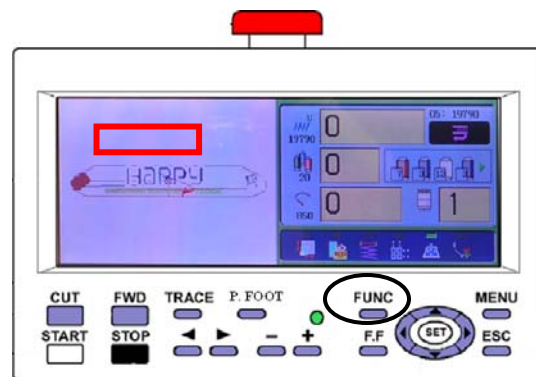
- Is horizontal
- Does not touch the machine cylinder arm
- Does not exceed the height of 1/16 inches above cylinder arm.



**Warning:** Any movement of the Tubular Clamping System must only be carried out with the clamp in the **closed position**.

**Move the arm to true center (if not there already).** Press **FUNC** and arrow down to **CENTER** and press **SET**. The arm moves if it is not already centered.

**Notice:** The center is **NOT** the center of the installed hoop.



### Set Up the Design:

1. **Transfer the design into Voyager** via either USB or Compact Flash and select a design.

2. **Go to the SETTING menu** by pressing **MENU**, then using the arrow keys to select **SETTING**. Press **SET** to enter the setting menu.

3. **Make sure the design was digitized "center-center"**. Check in window marked 3 if the Y-distances from center and the X-distances from center are matching pairs.

If not adjust the center using the digitizing/editing software or ignore the instructions given below.

4. **Press the blue right-arrow key** in the control panel to navigate to the third tab in the setting screen as shown (See picture - box 4) and using the down arrow key 2 time to access box marked 5 and select **SET**.

5. **Program the correct offset value for the installed Tubular Clamping System.**

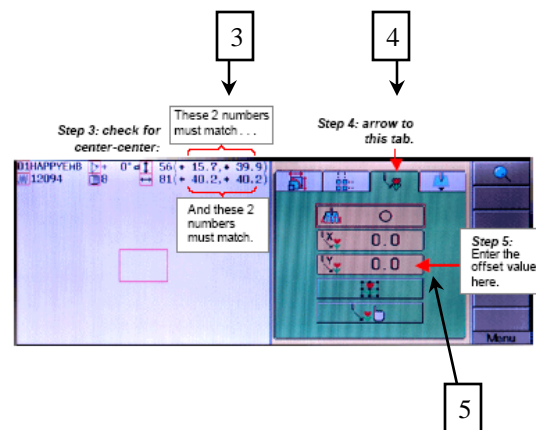
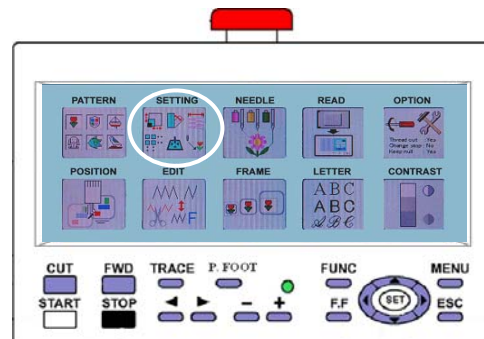
**Important the values must be in the MINUS numbers!**

**MINUS — 60.3** for smaller clamping system (ITCS1)

**MINUS — 75.5** for larger clamping system (ITCS2)

6. **Return to the main screen** by pressing **ESC** twice.

7. **Trace the design by pressing TRACE.** **Important:** Just in case, be prepared to hit the red panic button during the **TRACE** and any **OFF-SET** executions.



## Reversing Directions of Frame Movements

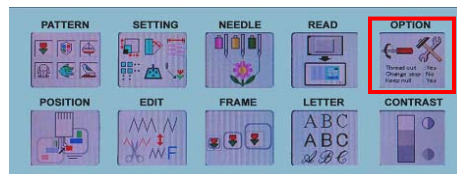
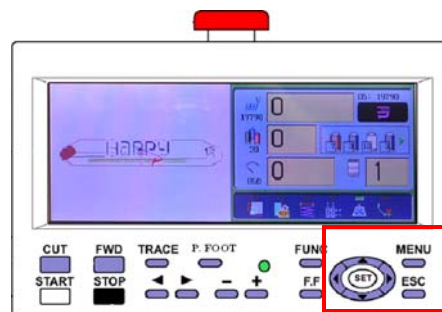
### Description of function

The reverse frame move option reverses the direction of movement when positioning the design in the frame menu.

```

11 Slow (mend out) :No
12 STR. Lock stitch :Yes
13 Width data all : 0.0
14 RS-232C Baud rate:38400
15 TRD. break detect:Normal
16 Convert cap :Yes
17 Cap Frame Type :Normal
18 Revers frame move:No
19 Revers move fast :No
20 Opning GUIDE :Yes
    
```

Select Menu then using the arrow keys move to "OPTION menu", press "SET" .



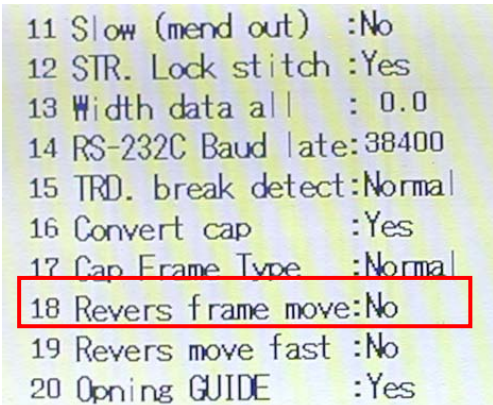
After selecting options, two icons will appear, the one on the right is for machine options and the one on the left is for pattern options. Select the **Machine Icon** and press, "Set".



## Reversing Directions of Frame Movements

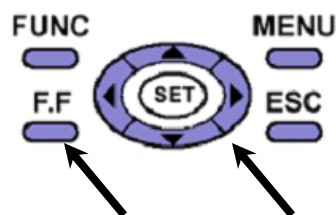
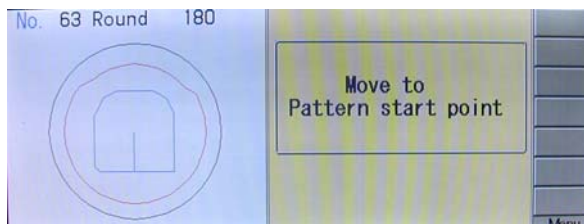
Use the up/down arrow key to move to "18". Reverse frame move" Press "SET" to activated, Use the up/down keys to change to "yes", Press "SET" to accept change.

Select **ESC** to exit the **FRAME** menu.



```
11 Slow (mend out) :No
12 STR. Lock stitch :Yes
13 Width data all : 0.0
14 RS-232C Baud rate:38400
15 TRD. break detect:Normal
16 Convert cap :Yes
17 Cap Frame Type :Normal
18 Revers frame move:No
19 Revers move fast :No
20 Opning GUIDE :Yes
```

The **FRAME** menu and positioning the pattern using the arrow keys and **FF** (Fast forward) the directions are reversed.



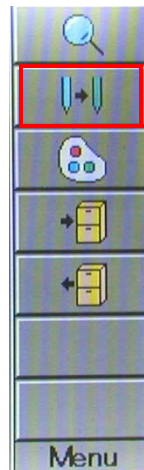


## Single Needle Color Transfer

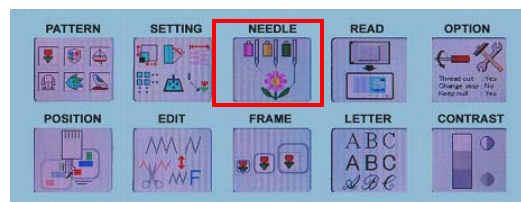
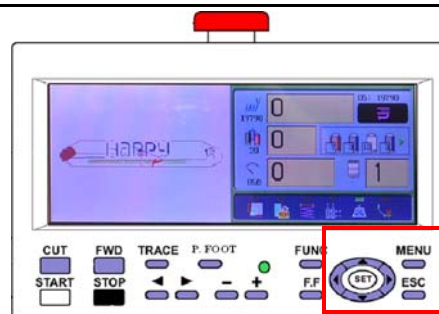
### Description of function

Change the needle number and allocate different colors/needles.

Note: In case the thread ran out, with this feature quickly a new thread/needle can be assigned to the design, rather than changing the thread.

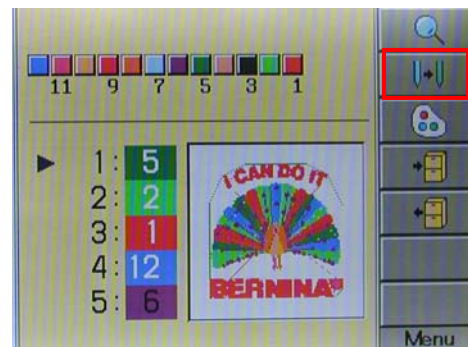


Select **MENU** then using the arrow keys move to **NEEDLE**, press **SET**.

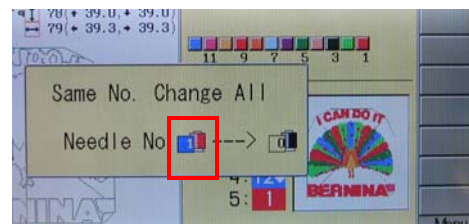


## Single Needle Color Transfer

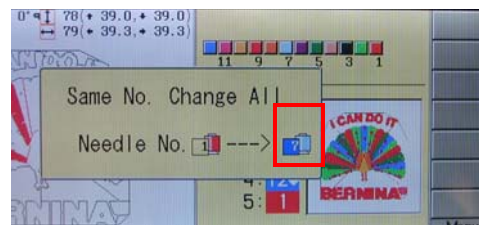
Select **MENU** again to get to the submenus. Use the arrow keys to move to the **TWO NEEDLES**, select **SET**.



Select the up/down arrow keys to chose the needle, select **SET**



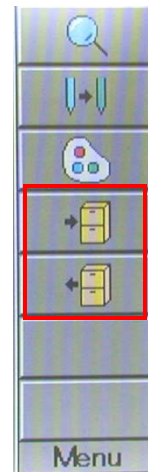
Select the up/down arrow keys to select the replacement needle/color. Select **SET** to accept the change.



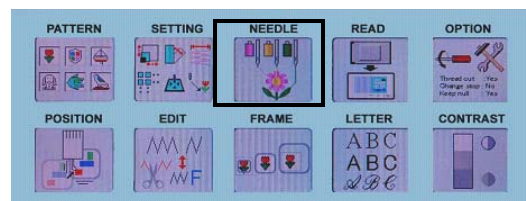
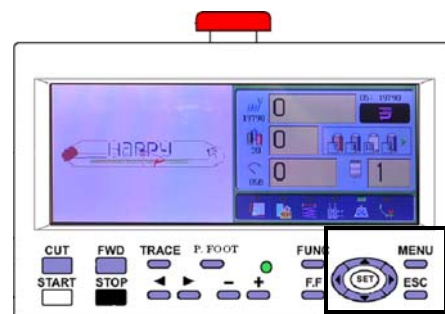
For example needle # 1 is replaced with needle # 7.

**Description of function**

With the color change data options saved color data can be transferred to another pattern with similar colors and sequences.



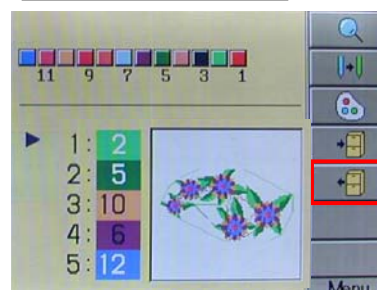
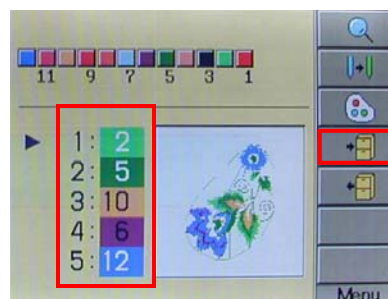
Select **MENU** then using the arrow keys move to **NEEDLE**, press **SET** to enter **NEEDLE** menu.



**Explanation:**

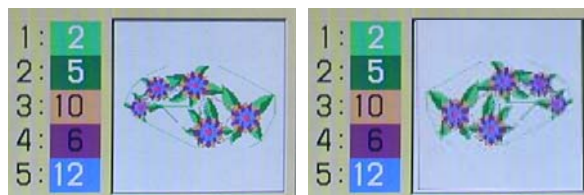
The **READ** function stores the color data into a temporary memory. Color stops are also transferred.

The **WRITE** function writes the data back to a selected design.



**Example of practical uses:**

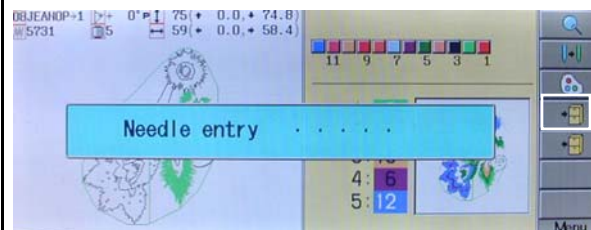
The color change data application is useful patterns with similar colors and sequences.



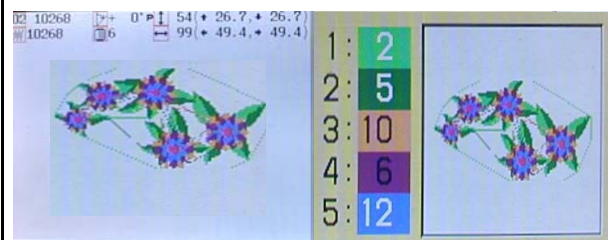
If a pattern has to be altered in the software and resent to the machine, the colors have to be reallocated. With the color transfer feature reallocating the data is simple.

## Pattern color data Transfer

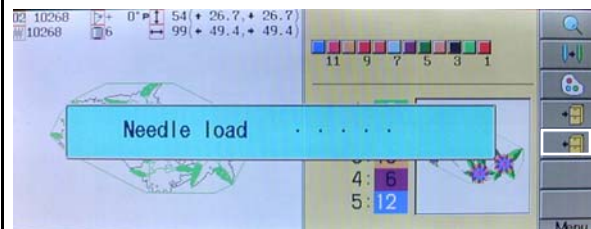
Select the pattern to **READ** the color data from. After entering the **NEEDLE** menu, select **MENU** again for the submenus. Use the arrow keys to move to the data **READ** Setting. Select **SET** to start the data read.



Open the new pattern to apply the color data.



After entering the **NEEDLE** menu, select **MENU** again for the submenus. Use the arrow keys to move to the data **WRITE** setting. Select **SET** to start the data transfer.



## Start Embroidering from a Particular Stitch

### Description of function

Direct stitch number input within a design.

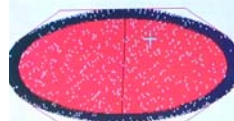
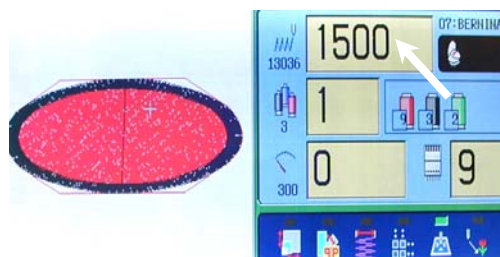
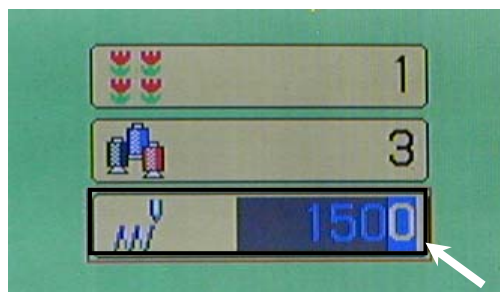
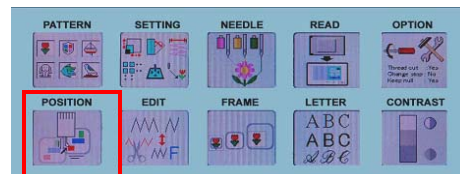
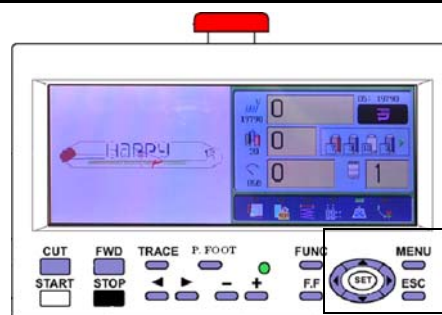
Select **MENU**, using the arrow keys move to **POSITION**, press **SET**.

Using the arrow keys move to the **STITCH ICON TAB**, press **SET** to activate.

Use the up/down arrows to count up/down among the stitches Left/right moves the bar from the single to 10, 100, 1000 and 10000 position. Select **SET** to accept.

Select **ESC** to exit back to **MENU** mode

Machine advances to the selected stitch number.

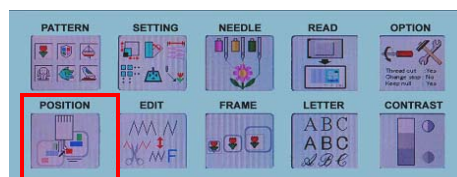
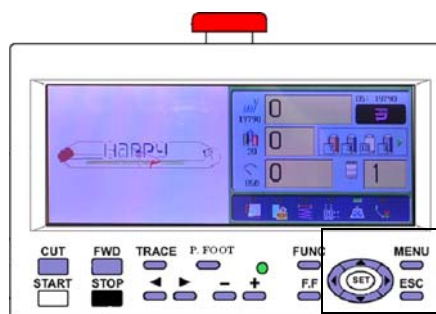


## Start Embroidering from a Particular Color

### Description of function

Move to a specific color number within a design.

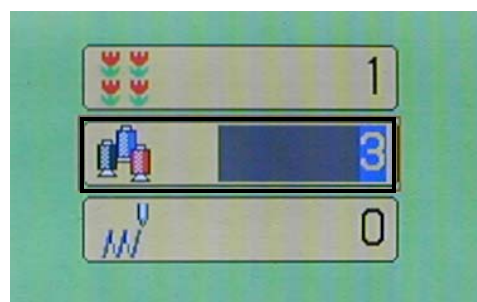
From **MENU** screen using the arrow keys move to "**POSITION**", press "**SET**" to enter position menu.



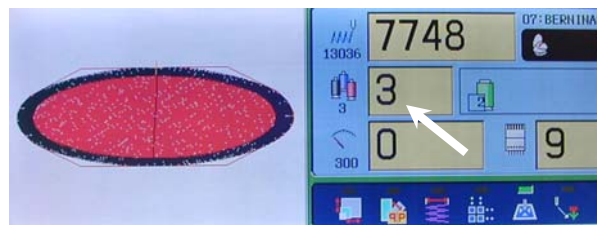
Using the arrow keys move to the **COLOR ICON TAB**, press **SET** to activate.

Use the up/down arrows to count up/down among the colors. Left/right moves the bar from the single to the 10 position. Select **SET** to accept.

Select **ESC** to exit back to **MENU** mode



Machine advances to the selected color.

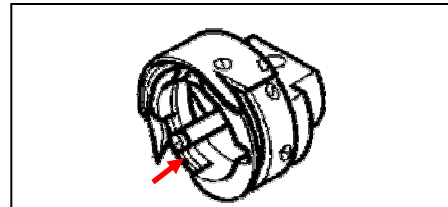


**Description of function**

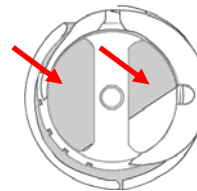
**Daily Maintenance**

Every 8 hours of operation the hook must be cleaned and lubricated. Open the rotary hook door, remove the bobbin, clean the entire area and apply oil in the places shown.

Use light weight rotary hook oil.



**Rotary hook (3/4 view):** apply 1 drop of oil to channel shown by the arrow.



**Rotary hook (front view):** Also apply oil to the surface exposed by the two half-moon

**Weekly Maintenance**

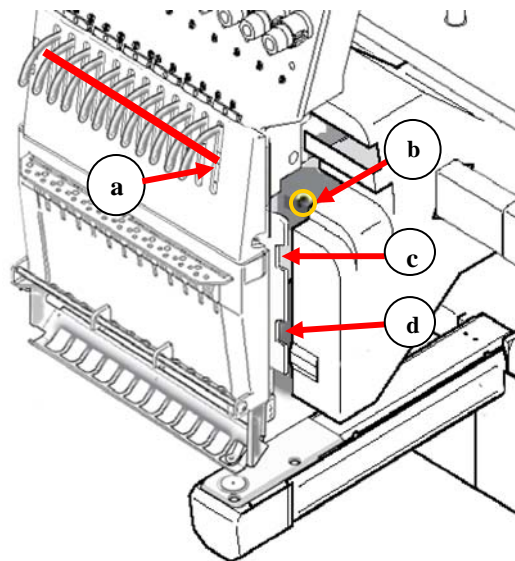
Every 40 hours of operation move head all the way to the left hand side (Needle # 1 position).

**3 oiling points:**

(a) All **needle bars** (1– 12) In an steep angle look from left to the right hand side and locate the needle bars through the take up lever slot in the front cover. Each needle bar receives one drop of oil. Remember to up-count to 12 needle bars when applying the oil.

(b) **Head shaft.** Apply one drop of oil into the opening outlined with a yellow circle).

(c, d) **Presser foot guide bar.** Apply one drop of oil each on the top and bottom of the presser foot bar, located behind metal plate with the two cut outs.

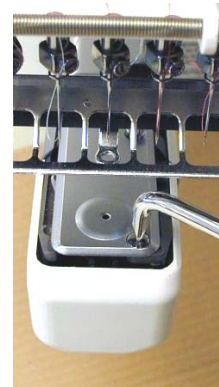




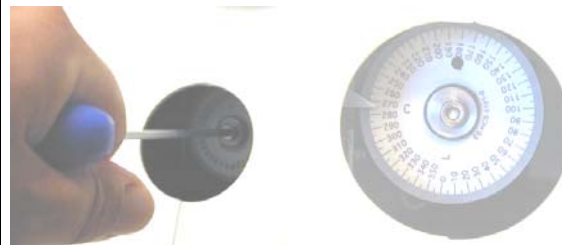
### Weekly Cleaning

Every 40 hours of operation clean the area below the needle plate, including the thread cutter.

1. With the machine turned off and disconnected from the mains remove the needle plate using the offset screwdriver.



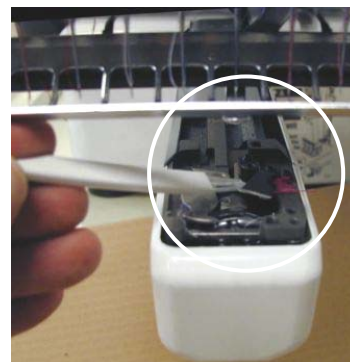
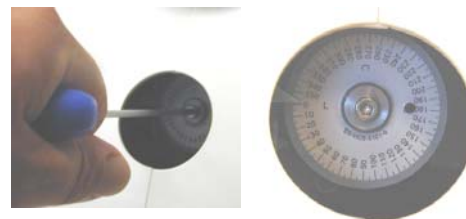
2. In the back of the machine remove the rubber cap. With the blue handled 3mm hexagonal T-driver and turn the main shaft clockwise to the "C" point, (275 degrees)



3. From the left hand side insert the manual lever and pull down and hold it in place. Then turn the main shaft clockwise to the "L" point, (0 degrees) to open the thread cutter.

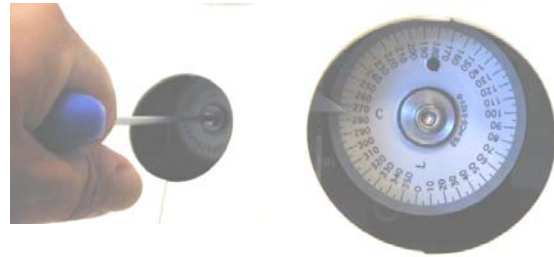


4. Clean out any waste thread and dust from the thread cutter knife and surrounding area.



5. Using the 3mm hexagonal driver, turn the main shaft clockwise back to the “C” point (275 degrees).

Note: When the machine is under power and if the “C” point is not reached manually an error message 050 is displayed. Manually move to the “C” point or select **AUTO**.



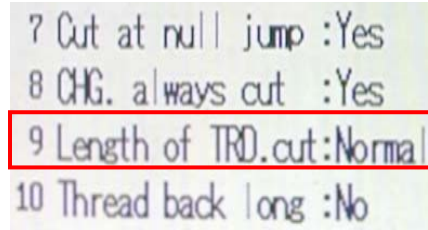
6. Remove the manual lever and secure the needle plate with two screws.



## Changing the Thread Cutting Length

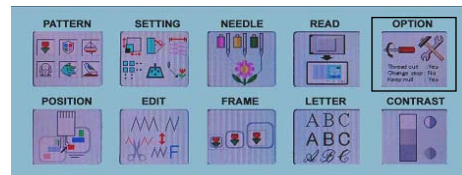
### Description of function

If the first stitch is not being formed after a thread cut, the length of the cut can be changed from **NORMAL** to **LONG**

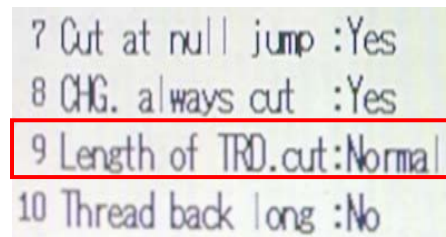


Select **OPTION**, press **SET**.

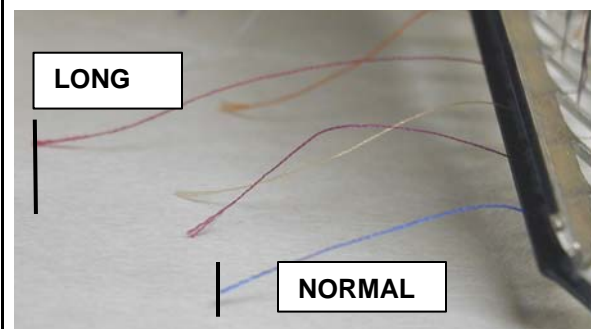
After selecting options, two icons appear, the one on the right is for machine options and the one on the left is for pattern options. Select the **Machine Icon** and press, "**Set**".



Use the up/down arrow key to move to 9. Length of TRD.cut Press **SET** to activated, Use the up/down keys to change to Long, Press **SET** to accept change. Select **ESC** to exit the frame menu.

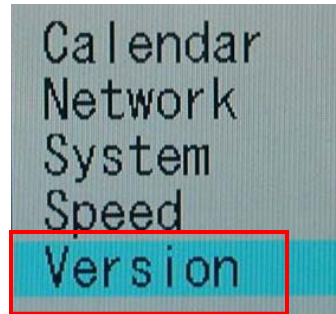


Different cut settings.

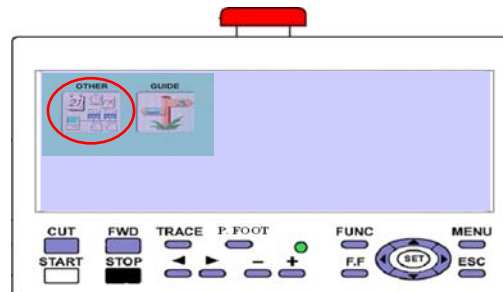


**Description of function**

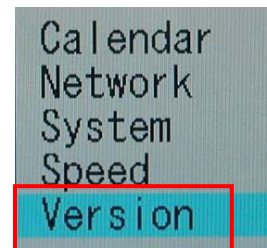
Checking the firmware version.



Select **OTHER**, press **SET**

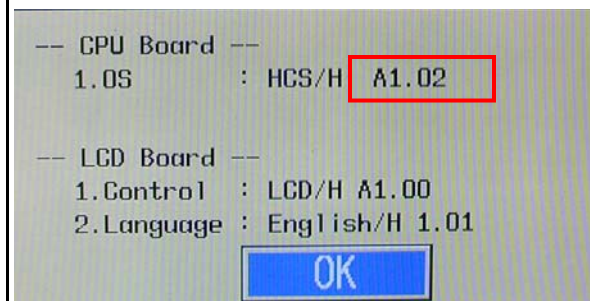


Use the down arrow key to move to **VERSION** and press **SET** to select.



The Firmware Version of the machine is the number indicated .

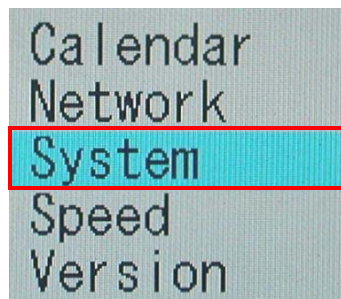
Press **SET** to return to **MENU** mode.



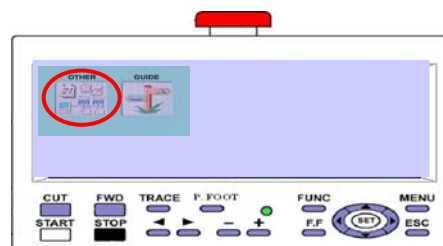
**Description of function**

Setting the machine to factory default.

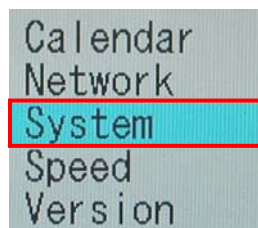
Note: All settings in **OPTION** menu are reset the saved designs are not effected.



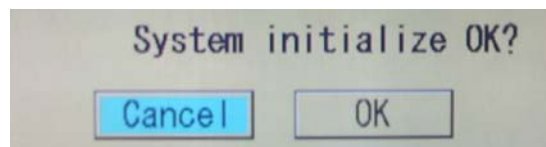
Select **OTHER** menu, press **SET**



Use the down arrow key to move to **SYSTEM** and press **SET** to select.



Use the arrow keys to move to **OK** and select **SET** to begin. Machine displays a Happy logo (Initialization screen). Select **SET** to begin initialization.

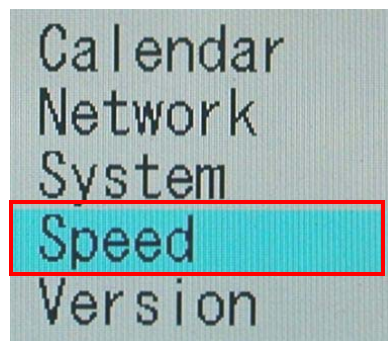


Note: Remember the machine speed must be calibrated after a initialization to achieve maximum speed capability.

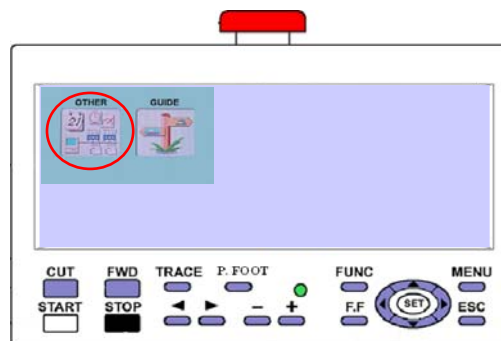


**Description of function**

Maximum speed calibration.



Select **OTHER** press **SET** to enter.



Use the down arrow key to move to **SPEED** and press **SET** to select.

Note: Secure the needle thread in the horizontal spring of the needle that is over the presser foot to prevent unthreading.

Use the arrow keys to move to **OK** and select **SET** to begin. The machine begins to run slowly and gradually increase in speed. At the end of process, **COMPLETE** displayed across screen and returns to the drive mode. Turn off the machine and restart.

